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THE ORIGINAL
ASTRONOMICAL OBSERVATIONS,
MADE IN THE COURSE OF
A VOYAGE towards the SOUTH POLE,
AND
ROUND THE WORLD,

In his MAJESTY'S Ships the RESOLUTION and ADVENTURE,

In the Years MDCCLXXII, MDCCLXXIII, MDCCLXXIV, and MDCCLXXV,

By WILLIAM WALES, F. R. S.

Master of the Royal Mathematical School in Christ's Hospital;

And Mr. WILLIAM BAYLY,

Late Assistant at the Royal Observatory.

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at the Expence of which the Observations were made.*

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MDCCLXXVII.



TO THE RIGHT HONOURABLE

J O H N Earl of S A N D W I C H,

First Commissioner of the Boards of ADMIRALTY and
LONGITUDE, &c. &c. &c.

M Y L O R D,

IT affords me the highest Satisfaction that I am permitted to address the following Sheets to your LORDSHIP, as the Patronage of a Nobleman to whom these Sciences, and Literature in general, owe so much, and to whom this Work in a peculiar Manner appertains, will undoubtedly secure to it a favourable Reception from all Persons of Taste and Learning. It is indeed to your LORDSHIP, and the other Honourable and Learned Gentlemen who constitute the Board of Longitude, that the Existence of this Work is to be attributed; and to the same fostering Care and generous Encouragement we are indebted for the present Accuracy of our Instruments, the Correctness of our Tables, and I may with Truth add, the Skill and Dexterity of the intelligent Mariner, who now makes those Observations with a Degree of Success, which a few Years ago was despaired of.

That

D E D I C A T I O N.

That your LORDSHIP may long enjoy the high and important Offices, which you now fill so much to the Honour and Interest of the Nation, and to the Advancement of every useful Art and Science, is, I am well assured, the sincere Wish of every Friend to the true Interests of this great Empire, and of none more than of,

MY LORD,

Your LORDSHIP's much obliged,

most obedient, and

faithful humble Servant,

CHRIST'S HOSPITAL,
April 26th, 1777.

WILLIAM WALES.

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PLATE I. to face p. 134.

PLATE II. to face p. xii. of the Introduction.

PLATE III. to face p. 96.

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I N T R O D U C T I O N.

AT the time when the Voyage was first planned that gave birth to the following Observations, it had long been the opinion of learned men, that there must be vast tracts of land, at that time undiscovered, towards the South Pole. The probability of this opinion induced his Majesty to fit out two ships, the Resolution and Adventure, to determine this interesting point in Geography, amongst many others, equally curious, although not altogether so important as this. But it is not to be supposed that this opinion had any other foundation than mere probability: The Mathematical, or Philosophical reasons, which had from time to time been offered to the Public, having no foundation in nature; and the notion which some persons have got concerning the necessity of a counterpoise, is so very unphilosophical, that I am much surprised how so many ingenious Gentlemen have happened to adopt it. It is well known to Mathematicians, that every body, while at rest, however irregular, will be *in equilibrio*, when suspended on any line that passes through its center of gravity; nor will the revolution of a body, thus circumstanced, about an axis, be disturbed hereby, if the irregularities lie in the direction of its axis of rotation, as they are supposed to do in the case before us: if, indeed, they lie in any other direction, the matter will be different; but even then they must be much greater than any mountains that we know of to cause a sensible aberration in the axis of the earth.

If now, to an irregular mass of rigid matter, circumstanced as our earth is, there be added a quantity of matter perfectly fluid, it

is well known, that it will distribute itself into the vallies, or rather along those parts of the rigid matter which are nearest to the center of gravity, without any regard to the center of the mass; and consequently, if there be not a sufficiency of the fluid matter to overflow and cover the whole, those parts will be last covered which are towards that part of the globe, or body, which is least dense; and this might be the case even if the globe was a perfect sphere, without any irregularities in its surface. The same purpose might be effected, though perhaps in a more limited degree, merely by irregularities of the surface, even if the earth was every where equally dense. At the same time it is proper to observe, that, although there is no necessity, yet it was highly probable, before this experiment was made, that the irregularities both of density and surface might be nearly equal in both hemispheres; and on that foundation alone, I believe, the Voyage was ordered to be undertaken.

As soon as the Voyage was determined on, the Commissioners of Longitude, ever attentive to the improvement of Science, came to a resolution of sending out two persons, one in each ship, to make such observations as appeared to them most conducive to the advancement of useful knowledge, and were pleased to appoint Mr. WILLIAM BAYLY, late assistant at the Royal Observatory, and myself, for that purpose; at the same time, furnishing us with every instrument necessary for the undertaking, of the best sort, and constructed by the most approved makers, a list of which follows.

1. A Portable Observatory.
2. An Astronomical Clock, made by Mr. Shelton.
3. An assistant Clock, made by Mr. Monk.
4. A Transit

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4. A Transit Instrument, made by the late Mr. Bird.
5. An Astronomical Quadrant, made by the same excellent artist.
6. A Reflecting Telescope, of two feet focal length, made by the same.
7. An achromatic Refracting Telescope, of $3\frac{1}{4}$ feet, and triple object glasses, made by Mr. Dollond.
8. An achromatic divided Object-glasses, micrometer to ditto, made by Mr. Dollond.
9. A Hadley's Sextant, made by the same.
10. Another, made by Mr. Ramsden.
11. An Azimuth Compass, made by Mr. Adams.
12. A pair of Globes, made by ditto.
13. A Dipping Needle, made by Mr. Nairne.
14. A Marine Barometer, by ditto.
15. A Wind Gage, invented by Dr. Lind of Edinburgh, and made by Mr. Nairne.
16. Two Portable Barometers, made by Mr. Burton.
17. Six Thermometers, made by ditto.
18. A Theodolite, with a level, and a Gunter's Chain, made by the same.
19. An Apparatus for trying the heat of the sea-water at different depths.
20. Two Time-keepers, one made by Mr. Larcum Kendall, on Mr. Harrison's principles, and the other by Mr. John Arnold.

Mr. Bayley had a duplicate of each of the above instruments, excepting the Transit-instrument, which was to be used in common
by

by each of us; and that both his Time-keepers were made by Mr. Arnold. The following account of these articles will not, I presume, be unacceptable.

Of the Observatory.

The Observatory was contrived by my associate Mr. W. Bayly, and is undoubtedly one of the most convenient portable Observatories that has yet been made. The upright sides consist of eight staves, *AB*, *CD*, &c. (see Plate II.) about two inches diameter, and five feet and an half long, which supported a circular ring, 1, 2, 3, 4, &c. to 21. of eight feet diameter, and the covering, *r*, *q*, 9, 10, &c. to 21, *o*, *p*, of oiled canvass. The staves are of beach-wood, armed at the bottom with spikes, to stick into the ground, and at the top with small iron pins, fitted to holes which are made to receive them in the ring. The ring is composed of eight circular arches, of about three feet long, two inches broad, and an inch thick, made of beach-wood, and are readily put together, or taken asunder by means of strong iron plates, screwed fast with wood screws to the end of one arch, and by screws and nuts to the end of another, for the purpose of frequent screwing and unscrewing without danger of wearing out the holes, as would be the case with wood screws entering the wood itself. Into the outer edge of this ring are drove small staples, 1, 2, 3, 4, &c. and to the upper edge of the canvass, answerable thereto, are sewed several small hooks, which being hooked into these staples, serve to support the upper edge of the canvass, while its lower edge just reaches to the ground: The two parts of the canvass, 2, 1, *o*, *p*; 9, *q*, *r*, are supposed to be unhooked from the staples 1, 2, 3, 4, and 5, 6, 7, 8 respectively, and thrown back to shew the inside of the Observatory, and the manner of fixing up the Clock, to be described hereafter: *BE* is a brace of the same
fort

sort of wood, screwed fast to the top of the staff *AB*, by a screw at *B*, and to the bottom of the staff *DC* at *E*. These braces, from the top of one staff to the bottom of the next, kept the whole upright circular frame very steady. *FGHIKLMN* is another circular ring, exactly of the same dimensions and construction with the former, on which it rests: To this the roof of the Observatory is screwed by means of ten long screws, which pass through the ends of the rafters at *FGHIK*, &c. into iron nuts fixed in this upper ring for that purpose. The rafters *MP*, *RP*, *IU*, *KE*, &c. are attached to the crown-piece *PTU* by hinges, as represented at *T*, and *U*; and the two short rafters *FQ*, *NO*, are attached to the two *RP*, *MP*, also by hinges at *O*, and *Q*: By means of these hinges the roof is made to open or close like an umbrella, and of course, if disengaged from the circular ring *FRH*, &c. will fold together, and may be packed up in a very small compass.

The covering of the roof is of very thick canvas, many times painted, and comes down so far as to hang over at the eaves about four inches. The crown-piece, *PTU*, is about eight inches in diameter, and covered with a circular piece of canvas like that the roof is covered with. An eye-bolt *n* passes through its center, and is fastened on the inside by the nut *o*. This eye-bolt is intended for the reception of the hook *n*, which is fastened to the cord *m b g c d*, passing over a pulley at *W*, fixed in the top of the pole *VZ*. Towards the bottom of this pole there is fixed a lever *g b*, by means of the clamp *e f*, and its fellow on the opposite side, and the lever, turns on the iron bolt *f*. The cord *m b c d* passes through a hole *c* in the lever, and is drawn tight when the end *b* of the lever is turned upwards, and then made fast: Now if the end *b* of the lever be brought down towards *z*, and there fastened by means of the

b

becket,

bucket, or endless cord *ik*, the roof of the Observatory will be drawn up from off the ring 1, 2, 3, &c. and may be turned round by twisting or untwisting of the cord, until the opening *NOP* $\mathcal{Q}E$ is towards the sun, or any other object, of which an observation is wanted to be made. When the observation is completed, the lever may be released, and the roof let down again to rest with its whole weight on the lower ring, as it will then be less liable to be disturbed by the wind: There are also eight small staples on the inside edge of the lower ring 1, 2, 3, &c. and as many small hooks, corresponding to them, on the upper, or that to which the rafters of the roof are fastened. These hooks, when the roof is lowered down, are to be hooked into the staples, and the cord then drawn tight, to prevent, yet farther, the effect of the wind. The opening *N, OP, \mathcal{Q}F*, is covered, when not in use, by the flap, or roll of spare canvas $\mathcal{Q}RGS$, which is of the same sort, and painted in the same manner, as that which covers the roof. The whole of this Observatory, except the three poles *WZ, WX, and WY*, when taken down and packed up properly, is contained in a chest six feet and nine inches long, and about twenty inches square: The poles, which form the tripod, are of about fifteen feet long, and four inches diameter, may be laid amongst the spare booms of the ship, or if they should be thought too cumbersome there, may be cut out of the woods, or purchased for a trifle at any place where they are wanted.

Of the Clocks.

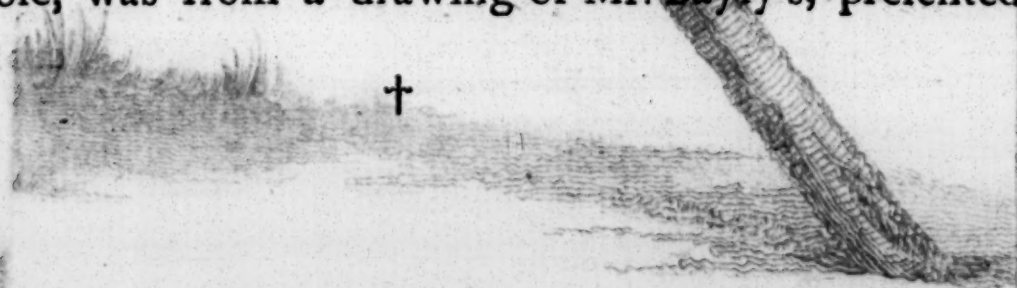
BOTH Clocks were made by Mr. Shelton, being furnished with compound pendulums of that sort usually called Gridiron Pendulums; and they escaped dead seconds in the late Mr. Graham's manner. They were fixed up by means of an iron block and frame,

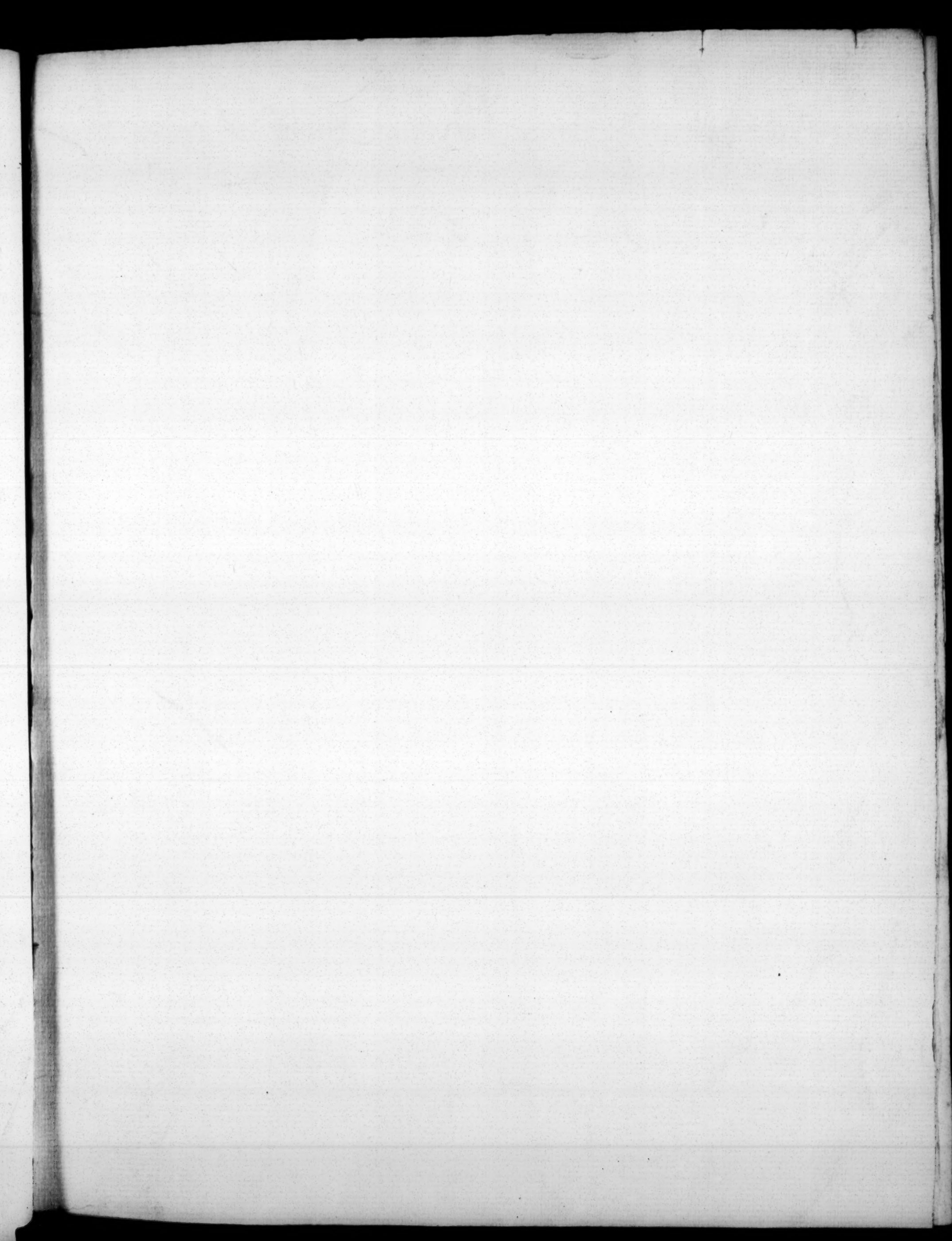
frame, which is represented in Fig. 3. Plate I. where *ABCD* is a flat block of cast iron, about three or four inches thick, two feet long, and 13 or 14 inches broad, weighing between three and four hundred pounds. This block was laid horizontally on four wooden piles shod with iron, and driven deep into the ground, where the soil admitted of it; and where it did not, was placed on the firm rock. *EFGH* is a frame of wrought iron, about an inch square, every where except at the top *FG*, where it is about three inches broad, and three-fourths of an inch thick, and it is screwed firmly to the block at *E* and *H* by the screws *aa*. *IK* and *LM* are two braces of wrought iron, an inch square, screwed firmly also to the block at *I* and *K*, by the screws *nn*, and to the frame *EFGH* at *K* and *M* by the screws *oo*. The bottom of the clock-case rested on the flat horizontal surface *ILEH*, with its back against the flat bar *FG*; to which it was screwed fast by two strong screws, passing through the back-board of the case, and the mortices *S*, *S*.

This method of fixing up a clock on temporary occasions, was the invention of the very ingenious Mr. John Smeaton, F. R. S. It has many advantages, as it may be set up in an hour's time, and may be effected in many situations, where the old method of letting down a post could not be made use of; particularly in rocky places, which are often the only eligible situations that can be found for observing near the sea-shore; it also affords an exceeding steady foundation, and is subject to no inconvenience, that I know of, but the expansion of the frame *EFGH* and braces *IK* and *LM*, which I found would be sometimes so great as to lift the clock-case entirely off the block *ABCD*, and thereby render it loose, and subject to acquire motion from the momentum of the pendulum. This however may, I think, be completely remedied by having a
cross

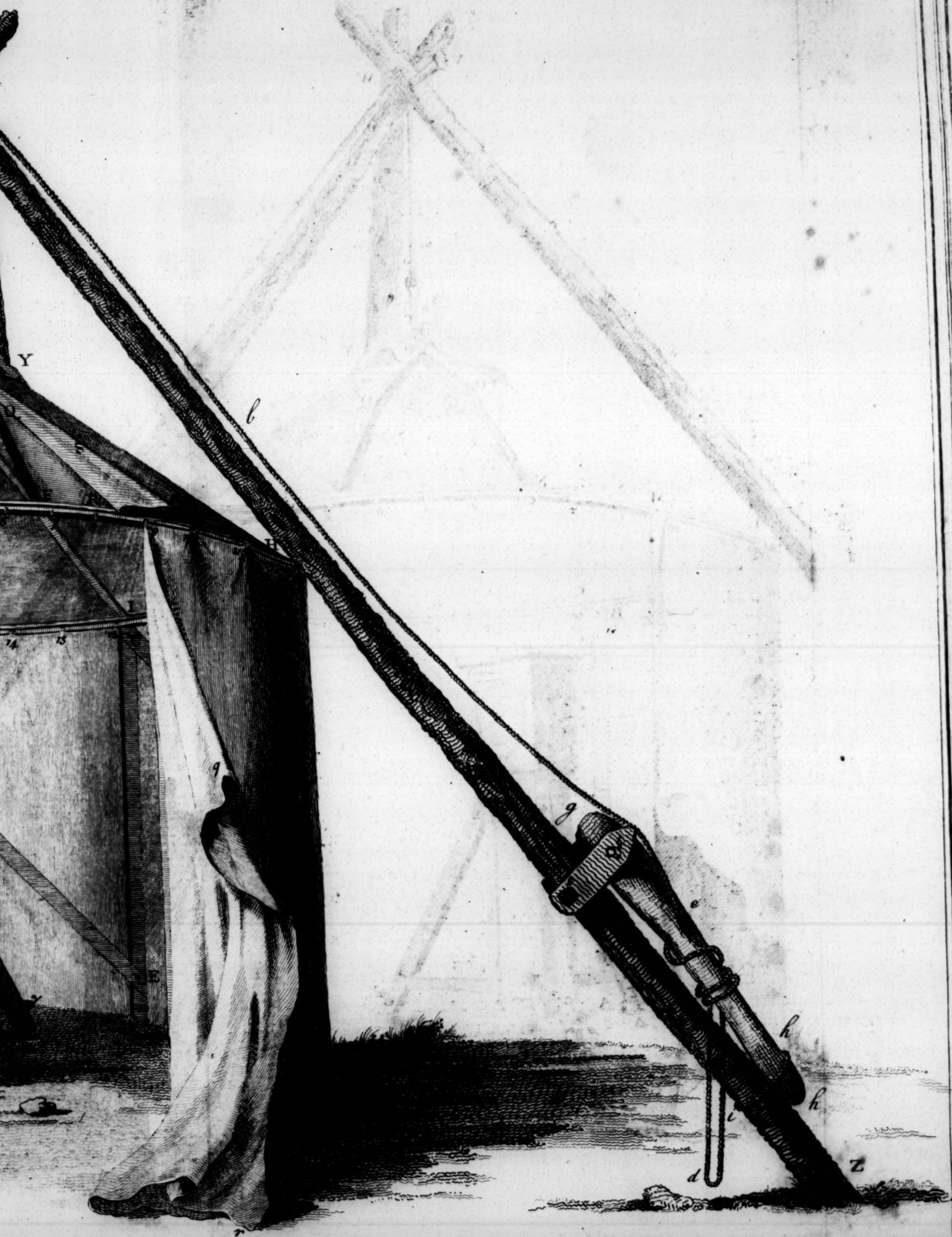
cross bar towards the bottom of the iron frame, as represented by the dotted lines *b c*, *d e*, to which the clock-case may be screwed fast in the same manner as at the top, by strong screws and nuts passing through the back-board and the mortices Q Q . There will indeed one inconvenience arise from this mode of fixing the bottom of the case, namely, that the clock must be set perpendicular to the horizon, entirely by the driving of the piles on which the iron block lies, and which will be very troublesome and very tedious to do, and of course take up much time, which in the cases where this apparatus will be most wanted, is often extremely precious; and on that account I would propose that there should be two strong arms fixed to the cross bar *b c*, *d e*, instead of the mortices Q Q , projecting forward, at such a distance as to admit the clock-case freely between them. In each of these arms should be a pretty strong screw; and by easing one of these screws, and tightening the other, the clock might very readily be brought perfectly upright, after the iron block had been laid nearly horizontal; and when it is so, both screws may be made to press against the case with equal and a moderate force. Another screw might be added in the iron bar *b c d e*, if thought proper, to set it upright the other way; but this is not so necessary.

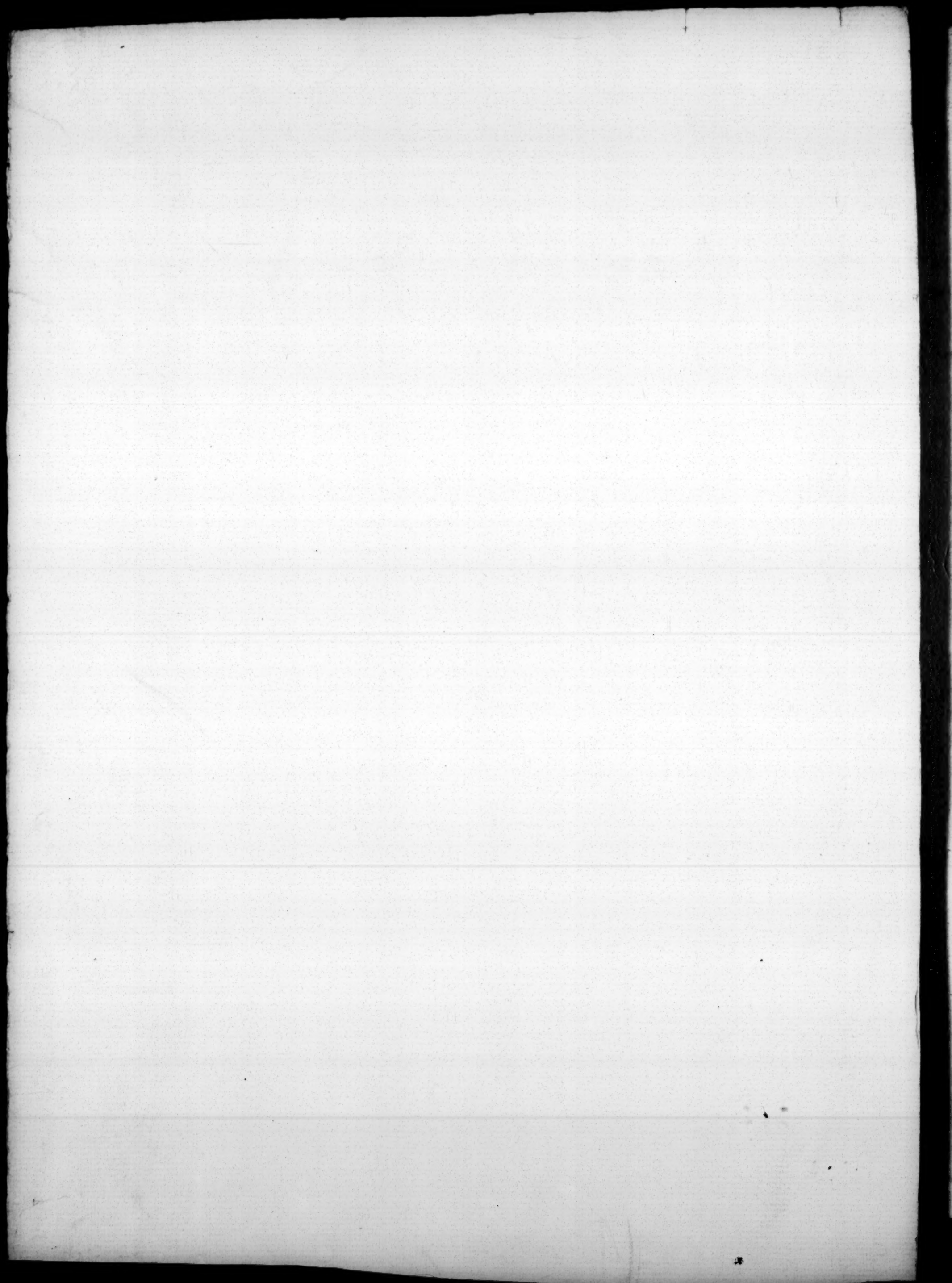
As neither of these remedies were thought of at the time Captain Cook set out on his present voyage, it was thought advisable to try other methods; and that represented in Plate II. was made choice of to be used by the Gentlemen who make the Astronomical Observations in the course of the voyage which he is now gone upon; the first hint of which, except what is to be met with in the Appendix to my Lord Mulgrave's Voyage towards the North Pole, was from a drawing of Mr. Bayly's, presented to the Commissioners





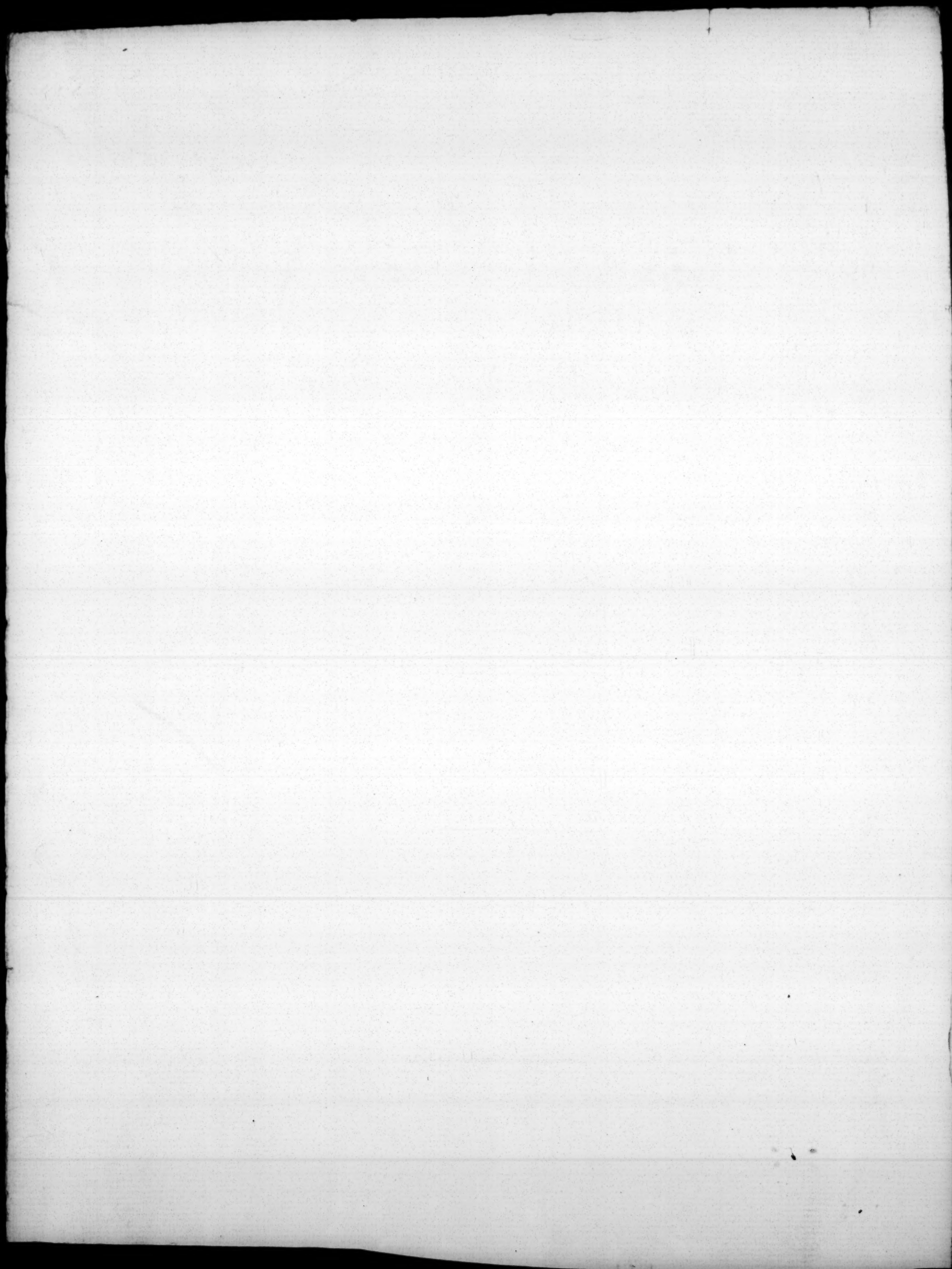






missioners of Longitude, and by them put into the hands of Mr. Arnold, watch-maker, to execute, and who made some deviations from the original drawing, which he thought was for the better. In the engraving, $\mu \nu \phi \lambda$ represents the Clock, supported clear of the ground, by the pieces $\Phi \Omega$, ΓE , $\Sigma \Theta$; which are of mahogany, about two inches thick, and about two inches and a half broad, and screwed firmly to the case of the Clock at Φ , Γ , and Σ , with strong iron screws, and nuts. These pieces rest on three oaken piles, Λ , Π , and Δ , drove deep into the ground, and may be raised or lowered by means of the screws α , β , γ , as may be necessary, to bring the Clock-case to stand perpendicular. Two of those pieces, $\Phi \Omega$, and $\Sigma \Theta$, are screwed to the two sides of the Clock-case, very near the front, and just below the rising-board, and the third ΓE , directly in the middle of the back-board, at exactly the same height with the other two. $\delta \epsilon$, $\Omega \eta$, and $\rho \vartheta$, are three horizontal braces of mahogany about two inches square, morticed fast into the pieces ΓE , $\Phi \Omega$, and $\Sigma \Theta$, at δ , Ω , and ϑ , and force pretty hard against the case of the Clock at ϵ , η , and ρ ; that is, $\delta \epsilon$ directly against the middle of the back-board, and $\Omega \eta$, $\vartheta \rho$ against the two fore-corners of the case; the ends η and ρ of these two last being cut in an angle exactly to fit them. The case of the Clock, particularly the back-board, is made very strong, and is but just of a height sufficient to contain the pendulum.

Before I quit this subject, it may not be amiss to take notice of some very extraordinary irregularities, which happened in the going of the Clocks, as well as to bring into one point of view their several rates of going at the different places where they were set up.



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The Clock B, which, I believe, has not been remarked in the body of the Work, gained $5''.03$ a day on fyderial time from March 28th to April 1st, 1772, when fixed up at the Royal Observatory in Greenwich-Park, to pieces of wood let into the wall of the Observatory; that is, in the manner which the Transit Clock at that place is fixed up: and the Clock C lost $0''.373$ a day on fyderial time from March 25th to March 28th, 1772, when fixed up at the same place, and in the same manner. The mean vibrations of the pendulum were $1^{\circ}53'$ each way. This Clock, with the same length of pendulum, lost $20''\frac{3}{4}$ a day on fyderial time, from July 1st to the 9th, 1772, at Drake's Island in Plymouth Sound, latitude $50^{\circ}21'\frac{1}{2}$ N., and longitude $4^{\circ}16'\frac{1}{2}$ W. of Greenwich; and the pendulum vibrated $1^{\circ}50'$ each way.

At Fonchiale, in Madeira, latitude $32^{\circ}33'\frac{1}{2}$ N., longitude $17^{\circ}11'\frac{1}{4}$ W., B lost $36''.6$, and C $1'15''$ a day on fyderial time, from July 30th to August 1st, 1772: the pendulum of B vibrated $1^{\circ}40'$ each way, and that of C $1^{\circ}53'$.

At the Cape of Good Hope, latitude $33^{\circ}55'\frac{3}{4}$ S., longitude $18^{\circ}23'\frac{1}{4}$ E., B lost $1'15''.43$, and C $1'27''.35$, a day on fyderial time, from November 2d to the 14th, 1772: the mean vibrations of the former were $1^{\circ}37'\frac{1}{2}$, and those of the latter $1^{\circ}43'\frac{1}{2}$.

At Dusky Bay in New Zealand, latitude $45^{\circ}47'\frac{5}{8}$ S., longitude $166^{\circ}18'$ E., B gained $4''.066$ on fyderial time, from April 5th to the 21st, 1773; and its mean vibrations were $1^{\circ}35'$ each way.

At Queen Charlotte's Sound in New Zealand, latitude $41^{\circ}6'$ S., longitude $174^{\circ}18'\frac{1}{2}$ E., C lost $1'29''.003$ a day on fyderial time, from
April

April 20th to May 20th, 1773; and its mean vibrations were $1^{\circ} 52'$ each way. This Clock went here with greater regularity from day to day than it had done at any other place, except that some time in the night between the 14th and 15th of May, it seems to have stopped exactly $12''$, which is a most extraordinary circumstance, especially when we consider Mr. Bayly's remark on that head, p. 36. and no way, that I know of, to be accounted for.

At Point Venus in Otaheite, latitude $17^{\circ} 29' \frac{1}{4}$ S., longitude $210^{\circ} 25'$ E., B lost $1' 28''$,₄₂, and C $2' 10''$ ₆₉ a day on syderial time, from August 27th to the 31st, 1773: the pendulum of the former vibrated $1^{\circ} 39'$, and that of the latter $1^{\circ} 46' \frac{1}{2}$ each way.

At Queen Charlotte's Sound, B lost $21''$,₁₁₆ a day, from November 6th to the 22d, and vibrated $1^{\circ} 38'$ each way: and C lost at the same place $1' 8''$,₄₇ a day, from December 7th to the 15th, 1773; and its pendulum vibrated $1^{\circ} 46'$ each way. The ball of the pendulum was now about 7 feet above the sea at low-water mark: when here before, it was about $84 \frac{1}{2}$ feet above it.

At the Cape of Good Hope this Clock lost $1' 36''$,₀₁₆ a day on syderial time, from March 23d to the 28th, when Mr. Bayly removed the Observatory and Clock to another part of the garden; after which, from the 28th to April 10th, 1774, it lost at the rate of $1' 17''$,₇₁ on syderial time. I have remarked in p. 76. that Mr. Bayly says, he is absolutely certain no alteration happened in the length of the pendulum; and I make no doubt but that he examined it with the utmost attention: but if some alteration in its length did not take place, and which, I think, might possibly happen, without his being able to discover it, it is utterly impossible to account for so great and sudden a change. The pendulum vibrated $1^{\circ} 46'$ each way.

The

The Clock B lost $1' 22''_{64}$ a day on fyderial time at Otaheite, latitude $17^{\circ} 29'_{\frac{1}{4}}$ S., and longitude $210^{\circ} 25'$ E., from April 23d to May 9th, 1774; but I here reject its loss between April 30th and May 1st, as it appears to have lost exactly $1'$ more on that day than on any other; a circumstance I cannot account for *properly*, as I never, that I know of, left the case or face of the Clock unlocked. There is, however, little doubt but that some *witty* Gentleman or other found means to open it, and put the Clock a minute back, I suppose, to try whether or no the *Astronomer* could find it out. The vibrations of the pendulum were $1^{\circ} 35'$ each way until April 30th, on which day they dropped to $1^{\circ} 30'$, and after that decreased gradually, so that on May 7th the vibrations were no more than $1^{\circ} 15'$. I could find no visible cause for this alteration; the Clock was not more than $\frac{2}{3}$ down: however, I wound it up, and in a few hours it increased its vibrations again to $1^{\circ} 35'$, and continued to vibrate over that arch until it was taken down on May 10th.

On setting it up a second time at Queen Charlotte's Sound in New Zealand, I had much trouble in getting it to go at all, as most of its parts, and particularly the steel rods of the pendulum, were covered with rust. It lost at the rate of $15''_{58}$ a day on fyderial time, from October 22d to November 5th, 1774, and went pretty regularly after I did get it to go. I here added fresh oil, and its vibrations were then $1^{\circ} 37'_{\frac{1}{2}}$ each way.

At Christmas Sound in Terra del Fuego, latitude $55^{\circ} 22'$ S., longitude $289^{\circ} 58'_{\frac{2}{3}}$ E., B gained $36''_{52}$ a day on fyderial time, between December 23d and 26th, 1774; and the mean vibrations of the pendulum were $1^{\circ} 37'_{\frac{1}{2}}$ each way. This was the highest latitude that I had an opportunity of trying it in.

March 23d,

INTRODUCTION.

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March 23, 1775, I set B up a second time at the Cape of Good Hope, and from that time to April 23, it lost at the rate of $42''$, 207 a day on Syderial time: the pendulum vibrated $1^{\circ} 37\frac{1}{2}$ each way from the perpendicular until April 9, and after that time $1^{\circ} 40'$. These matters are brought yet nearer into one point of view in the following table.

Places.	Clock B gains or loses on Sy- derial Time.	Latitude.	Longitude.	Time.
Greenwich	+0 5,03	51 28 $\frac{1}{2}$ N.	0 0	March 1772.
Madeira	-0 36,6	32 33 $\frac{1}{2}$ N.	17 11 $\frac{1}{4}$ W.	July 1772.
Cape of Good Hope	-1 15,43	33 55 $\frac{3}{4}$ S.	18 23 $\frac{1}{4}$ E.	November 1772.
Ditto	-0 42,21			April 1775.
Dusky Bay	+0 4,07	45 47 $\frac{1}{2}$ S.	166 18 E.	April 1773.
Point Venus	-1 28,42	17 29 $\frac{1}{4}$ S.	210 25 $\frac{1}{2}$ E.	August 1773.
Ditto	-1 22,64			May 1774.
Queen Charlotte's Sound	-0 21,12	41 6 S.	174 18 $\frac{1}{2}$ E.	November 1773:
Ditto	-0 15,58			October 1774.
Terra del Fuego	+0 36,52	55 22 S.	289 58 $\frac{3}{4}$	December 1774.

Places.	Clock C loses on Syderial Time.	Latitude.	Longitude.	Time.
Greenwich	-0 0,37	51 28 $\frac{1}{2}$ N.	0 0	March 1772.
Drake's Island	-0 20,62	50 21 $\frac{1}{2}$ N.	4 16 $\frac{1}{4}$ W.	July 1772.
Madeira	-1 15,0	32 33 $\frac{1}{2}$ N.	17 11 $\frac{1}{4}$ W.	July 1772.
Cape of Good Hope	-1 27,35	33 55 $\frac{3}{4}$ S.	18 23 $\frac{1}{4}$ E.	November 1772.
Ditto	-1 36,02			March 1774.
Ditto	-1 17,71			April 1774.
Queen Charlotte's Sound	-1 29,0	41 6 S.	174 18 $\frac{1}{2}$ E.	May 1773.
Ditto	-1 8,47			December 1773.
Point Venus	-2 10,69	17 29 $\frac{1}{4}$ S.	210 25 E.	August 1773.

On reconsidering the circumstance of the Clock's different rates of going at the Cape of Good Hope in November 1772 and April 1775, I am rather inclined to alter my opinion, (see p. 131.) and to

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conclude

conclude that I made a mistake in setting the pendulum to its proper length, either when here in November 1772, or at Dusky Bay in New Zealand, after which time it was never altered; especially as the difference corresponds nearly to that which would arise from a whole revolution of the nut which supports the ball of the pendulum, namely 28", or 29", increased by the same quantity that the Clock had gone faster on being set up a second time both at Point Venus and Queen Charlotte's Sound: and it appears farther, by comparing its rate of going at the Cape with its rate at Madeira, which is nearly in the same latitude, that if this was the case, the mistake must have happened on setting it up in November 1772. Now if this correction be allowed, this Clock will have agreed with itself as near, perhaps, as must ever be expected for any clock to do; especially when set up at such distant times, and put away, in the intervals, in damp and improper places, as will ever be the case on board ships, unless a proper place be made and fitted up on purpose for it: and this I think might readily be done on board any ship; in which case, it may not be useless to add, that this place must not be near either side of the ship, nor near the fore-part of it; and must be well lined with strong painted canvas, and over that with thick baize. A space of 20 inches, by 15 broad, and $4\frac{3}{4}$ feet high would be fully sufficient for the purpose.

The assistant clock had a simple pendulum, whose rod was of white deal, and was always adjusted so that it would beat with the Astronomical Clock without sensible deviation for several minutes together; it shewed only minutes and seconds, was wound up in the common way that 24 hour clocks generally are, by pulling at the string, and constructed to give a very loud beat, and to strike with great exactness at the end of every minute, for the convenience

convenience of catching the second with more certainty in observing. The loudness of the beat is of great use when the wind is high; or when, on account of any other noise or disturbance, the Astronomical Clock cannot be heard; and was particularly useful to us, whose Observatories stood generally on the sea-shore, where the roaring of the surf seldom permitted us to hear the Astronomical Clock all the time it was going.

Of the Transit Instrument.

THIS Instrument being now too well known to require a general description, I shall only just mention some particulars which are peculiar to that we made use of, and the manner of fixing it up. The object-glass of the telescope, which was achromatic, was of $3\frac{1}{2}$ feet focus, and aperture $3\frac{1}{2}$ inches: it magnified about 50 times. The axis rested on two angular pieces of bell-metal, which were attached to two strong plates of brass, about six inches square; and these plates were let into two posts of Riga timber, six inches by eight, and screwed firmly to them by strong screws which came quite through the posts from the opposite side to that which the brass plates were let into. The angular pieces of bell-metal were made to slide on the brass plates, one in a vertical, and the other in an horizontal direction, by means of very fine steel screws, in order to adjust the Instrument, and bring it into the plane of the meridian. The posts had each of them a double tenon at the bottom, which fitted into two double mortices in a fill of the same timber, 10 inches by six or seven, and five feet in length, and they were braced together about three feet above this fill by a horizontal brace, and at the angles by cross braces.

When

When the Instrument was to be set up, a hole was dug five feet long, about 15 or 16 inches wide, and three feet deep, in a direction at right angles to the meridian; and the posts and fill, thus braced together, let carefully down into it, the Instrument was then put into its place, and directed to a mark which had before been determined to be in the meridian by means of the Azimuth Compass, after allowing for the variation, by moving the frame a little one way or other in the hole as might be required, and after that, the axis was made horizontal by hanging on the spirit level intended for adjusting the Instrument, and raising one end of the fill, or lowering the other, as was most convenient, until both ends of the axis were of the same height. The hole was then filled with earth and stones intermixed, and well rammed in, taking great care, in this operation, not to twist, or force the frame out of the plane of the prime vertical, by frequently putting the Instrument into its place, trying the level, and directing the telescope to the mark. This being done, the nicer adjustments of the Instrument were made by means of the screws which govern the two angular pieces of bell-metal on which it rests; and I never found that the Instrument, thus set up, would vary materially in its position.

Of the Astronomical Quadrant.

THIS instrument has been so well, and so fully described by the Rev. Mr. Maskelyne, Astronomer Royal, in his instructions relative to the observation of the Transit of Venus (See Nautical Almanac for 1769), that little remains to be said on this head. It may not however be amiss to mention a circumstance or two wherein my instrument appears to have differed from that which Mr. Maskelyne described. And first, the arch of excess of my Quadrant, or that
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which is intended for trying the line of collimation by observations of stars near the zenith, was not numbered 1° , 2° , 3° , &c. from the 0, or beginning of the divisions of the quadrantal arch, in which case it would have shewn the zenith distance of objects; but 89° , 88° , 87° , &c. By this means the altitude, instead of the zenith distance, is obtained, and the Vernier's divisions, and the seconds shewn by the micrometer-screw, are read off exactly in the same manner that they are on the quadrantal arch. Moreover, the quadrant, which I used, had an additional plumb-line, which, in making observations of stars near the zenith, was to be suspended, by means of an apparatus provided for that purpose, from the horizontal side of the quadrant; and made to bisect a very fine point on the arch, to the right hand of 0, or the beginning of the divisions of the quadrant, at the same time that the common plumb-line, or that which is generally used, bisects the two points which are on the arch and central plate of the instrument, and in a line parallel to that which passes through the center, and first division of the arch; after which, it is manifest, that the plumb-line which is commonly used, and which would now be disturbed by the telescope, may be taken away, and the additional one used in its stead. By this contrivance, the errors, which might have been committed in laying off two additional points, are entirely avoided, and all observations taken, in reality, from the same plumb-line. These might, very probably, be improvements, which Mr. Bird had afterwards made to this most excellent instrument.

The three next articles had nothing particular in their construction, and are all now so well known as to need no description. I shall therefore only add, that the two refracting telescopes were
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most exquisite ones, and furnished with moveable polar axes, for the convenience of adapting them to any latitude whatsoever.

Of the Hadley's Sextants.

Of these we had each of us two; one made by Mr. Dollond, with his new apparatus for adjusting the back horizon-glass, and the other by Mr. Ramsden. The latter was made by order of the Royal Society, in 1768, and I had before used it in my Voyage to and from Hudson's Bay, and knew its value. Its radius was 15 inches, and it was cut out of one solid plate of hammered brass, about one-ninth of an inch thick, leaving only the frame and cross-braces of about one inch and one-third broad, and these were supported on the back with perpendicular, or, as they are usually called, edge-bars, screwed very firmly thereto by screws, which passed through the frame of the Sextant into the bars themselves. The index also was very broad and strong, and stiffened by a perpendicular bar, that was screwed fast on its upper side. The massiveness of these bars and frame rendered the instrument rather heavy; but I have never met with one that preserved its figure, plane, and adjustments, so well as this did; and these properties are so very essential, that I think they should never be given up, or even run the least risk of having impaired, for the trifling consideration of reducing the weight of the instrument a few ounces, which I never found in the least inconvenient, after I became used to it. This instrument had some disadvantages, which are now generally remedied, such as the smallness of the horizon-glass; and, what is much worse, that glass, small as it was, did not reflect a full field of view when the index was put back to its
greatest

greatest angle. But, notwithstanding these, and some few other small imperfections, I esteem it, on the whole, to be the best instrument of the kind that I have ever handled.

The Sextant made by Mr. Dollond was of the same size, and constructed with edge-bars like that of Mr. Ramsden's, but less massive. However, the additional apparatus rendered it equally heavy; a fault, which, I have observed above, is of small moment, provided that the materials, and mode of putting them together, are such as will support it properly; but which, I cannot say, was altogether the case with this instrument; for it was very subject to bend, when put into different positions. The index also was very liable to spring in the direction of the angle measured, for want of being sufficiently stiff; and the horizon-glasses wanted stability, and were subject, without great care indeed, to alter their adjustment, even in the short space necessary to make an observation; so that I was obliged to examine their several errors both before and after observing, and to take a mean of the two results. At the same time, it is but justice to observe, that there were so many ingenious improvements and contrivances added to it, as would, had they been put together with more stability, have rendered it almost invaluable. But, as I scarce know where to begin, or how to describe these improvements, without giving a general history of the instrument, from its invention to the present time, I must beg the Reader's indulgence for this digression, and it may not perhaps be unentertaining, if I add something concerning the first application of Astronomical Instruments to Navigation, as well as enumerate the different sorts that have come successively into use, and the improvements that have from time to time been made in them before the invention of this most noble, and extensively useful instrument; and especially as what I have to offer on that head will,

on account of my want of time to consult a greater number of Authors, be comprised in a small compass.

I have not been able to meet with the least hint of any Astronomical Instrument being used at sea before the latter end of the 15th century; about which time, as *Jo. Pet. Maffei* tells us in his *Histor. Indic. Martin de Bohemia*, a disciple of *Regiomontanus*, recommended the Astrolabe for taking altitudes on board a ship; but, whether this was then put in practice, does not appear; and it seems much to be doubted, whether the cross-staff, which was invented about that time, or very soon after, was not the first Astronomical Instrument used at sea: this at least is certain, that all the old writers, whom I have met with, speak of the cross-staff as a very ancient instrument, except *John Werner* of Nuremberg, and who, as far as I can find, is the first person that has described it; but it does not appear to me, from what he there says, that he was the inventor, but rather that he looked on it as an instrument in some measure then known, and he recommends it to seamen, as proper for observing the distance of the Moon from the Sun, or a Star, in order to determine the Longitude at sea. *Werner's* book was printed in 1514; and I find the same instrument again recommended, and for the same purpose, by *Peter Apian*, in his *Cosmography*, which, by the date of his preface, appears to have been written in, or before the year 1524. About this time the method of finding the Longitude at sea by observations of the Moon's distance from the Sun or Stars is mentioned by several authors, and particularly by *Gemma Frisius*, in his *Principia Astronomie et Cosmographie*, printed in 1530, who also mentions the doing of it by means of a Clock or Time-keeper. He was also, if I mistake not, the first person who added three transoms to the cross-staff, which
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at first was made with one cross only, and on that account was very inconvenient; for either the staff must then be of an enormous length, to admit of measuring small angles, and of course very unmanageable, or else the divisions, especially towards 90 degrees, must be too minute to admit of any tolerable accuracy. This was about the middle of the sixteenth century; but it is not very certain by whom this was first done, for a cross-staff of this kind was described about the same time both by *Michael Coignet*, a native of Antwerp, in his *Instruct. nouv. des points plus excellents & necessaires touchant l'art de Naveger*, and also by *Waeghener*, a Dutchman, at that time so famous for drawing and publishing charts, that even to this day a book, or volume of charts, is, by our seamen, called a *Waeghener*.

In the year 1542 *Peter Nonius*, in his *Treatise de Crepusculis*, published the method of dividing, by means of several concentric circles, described on the face of the instrument, and dividing each of them into a different number of equal parts; as for example, the outermost circle of the quadrant was divided into 90 equal parts, or degrees, the next into 89, and the next into 88, &c.; so that in every observation, the index of the quadrant must cross one or other of these circles very near a division, from whence the degrees and minutes contained in that arch might be had by computation. But this troublesome method soon gave place to that by diagonal divisions, which method was invented about the same time, and applied to the cross-staff, and other instruments, by *Richard Chancellor*, an Englishman, and a most skilful artist. I assert this on the authority of *Thomas Digges, Esq;* who, in an ingenious treatise, published in the year 1573, concerning the New Star which about that time had appeared in *Cassiopea's Chair*, describes a cross-staff with which he had made his observations thereon, adding many curious obser-

vations on the use of this instrument, among which is a method of correcting the error arising from the excentricity of the eye ; and after mentioning this method of dividing very particularly, adds, " I freely confess that this method of dividing the staff into many sensible parts was not invented by me ; *but had been long used in England* by many skilful mathematicians. The first who used it, as I am well informed, was Richard Chanceler, a most skilful and ingenious mathematical instrument-maker, and whose name I more readily publish, as he is now dead, and has left behind him no memorial of his excellency, except some instruments fabricated with the greatest art and exactness, and the sweetest memory of his usefulness and skill in the minds of a few mathematicians yet alive."

I have been thus particular, because *Tycho Brahe*, at p. 403 of his works, published at Franckfort in 1648, giving an account of the same star, takes notice of this passage of Mr. Digges's, and adds, " But when I studied at *Leipsic* about twenty-eight years ago, I used a cross-staff thus divided, which I had out of the shop of that excellent mathematician *Homelius*, by favour of his servant *Bartholomew Schultet*: but whence *Homelius* had this, or whether he himself invented it, is with me uncertain." It is plain, from the very words here made use of, that *Tycho* meant to dispute the claim set up by Digges, for his deceased friend, to the invention ; but I think with little probability of success: for *Tycho* did not go to *Leipsic* before the year 1562, or 1563, as we learn from the account of his life, written by *Gassendus* ; and *Tycho* himself, in his epistle to *Christopher Bothman*, written in 1587, and printed at Uranibourg in 1596, says he was then about seventeen years old ; which, as he was born in the year 1546, must have been in 1563 ; that is, about ten years only before Mr. Digges wrote. Now Digges expressly says, that the
inventor

inventor was then dead, that the method had been long known and practised in England, and that he himself did not remember the first invention; but had only been informed of it, which could scarcely have been the case, if so useful an invention had been made no longer before than ten or twelve years.

In the same work *Tycho* tells us, that he had applied this sort of divisions to quadrants, sextants, &c. and takes notice that it is not accurately true, in these instruments, when the circles are drawn at equal distances: he also gives a method of correcting that error, by means of circular diagonals, which, if continued, would all pass through the center of the quadrant. And lastly, he hesitates not to prefer them to the *Nonian* method of division, described above; which was very troublesome, subject to greater errors, and not applicable to instruments capable of being used at sea. This method of describing diagonals was the invention of *Joannes Ferrerius*, a most industrious and accurate artist of that time; and it was afterwards done in a more elegant, and equally accurate manner, by our truly ingenious countryman Dr. Hooke, as may be seen in his animadversions on the *Machina Caelestes* of *Hevelius*.

In the mean time, many ingenious attempts were made to improve the *Nonian* method of dividing, by different persons, and particularly by *Jacobus Curtius*, vice-chancellor to the emperor *Rodolphus* the second, and the great patron of *Tycho* with that emperor, as may be seen at large in the works of *Tycho* and *Clavius*, published between the years 1580 and 1590, and which at length led the way to that most excellent one, now universally in use, and first published to the world by *Peter Vernier*, a native of the *Franche Comte*, in a small tract, entitled *La Construction et l'Usage du Quadrant nouveau*,
printed

printed at Bruffels in 1631. In the preface to this publication *Vernier* claims the invention as his own, and very justly observes, that by this method, minutes are easily distinguished in quadrants of three inches radius, the truth of which I have myself been often convinced of in instruments of Mr. Ramsden's making.

The fore-staff and astrolabe appear to have been the only instruments that were used at sea before the latter end of the sixteenth century, about which time the back-staff, as it was then called, on account of the observer's standing with his back to the sun, began much to be made use of. This instrument was invented by the celebrated Captain John Davis, who gave name to the Straits which separate West Greenland from America, and was by him first described, in a little book called the *Seaman's Secrets*, published in 1594; but this book I have not been able to meet with; however, there is a description of the instrument, together with a representation thereof, given by *Adrian Metius*, in his *Astronomia Institutio*, printed in 1605; and afterwards in his tract *De Arte Navigandi*, published at *Franckfort* in 1624; also in his *Doctrinæ Sphericae*, lib. 5. published at the same place, in 1630.

Originally this instrument had but one arch; namely, that on which the sight-vane slides, and the shade-vane was fixed on a straight rod, morticed into the upper side of the radius of the instrument, at a greater distance from the center, or horizon-vane, than the arch itself: but it did not long retain that form; for about the year 1600, or soon after, the arch was extended up to 90°, partly below, and partly above the radius, and the shade-vane fixed on that, to any proposed, even degree that was found most convenient; and in this state it was generally known by the name of the bow. It was not, however, many years before it under-

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went another alteration, and received its present form. For the shade-vane being then placed at a great distance from the horizon-vane, the penumbral shade became so extensive, that neither its beginning, end, or center, could be judged of with any tolerable degree of certainty; and what was yet worse, if the sun did not shine very bright indeed, the shadow could not be seen at all: it was therefore deemed necessary to lessen the radius of that part of the arch on which the shade-vane is fixed, in order to obtain a more distinct, and stronger shadow. It is not now known to whom we owe these improvements: some think they were made by the inventor himself; but this I much doubt. The last improvement that was made to this instrument, at least of any consequence, was the substitution of a lens, whose focal length was just equal to the radius of the lesser arch, instead of the shade-vane. This, although in itself so simple, was a very considerable improvement to the instrument; for the spot of light, formed on the horizon-vane in the focus of the glass, will be bright enough to be seen very distinctly, when the sun is so very faint that the least trace of the shadow from the vane cannot be discerned. It is said positively, at p. 250, vol. i. of Sir Jonas Moore's New System, that this was the invention of Mr. Flamsted, the first Astronomer-Royal; but others say it was contrived by the late Dr. Edmund Halley, and adapted to that instrument, in his voyage to the Island of St. Helena in 1677. It is not improbable that both might think of it.

These three instruments, namely the astrolabe, fore-staff, and Davis's quadrant, underwent many other alterations, and appeared under a great variety of shapes that are not taken notice of above. From the first came the semi-circle, the sea-rings, and sea-quadrant; the second produced the demi-cross, Mr. Hood's staff, and

some others; and the last, the plough, Elton's, and many other quadrants: none of which remained long in use, and very few deserved to have been used at all.

I come now to relate the inventions of instruments for measuring angles by reflection, the first hint of which was, I am firmly persuaded, given by that truly ingenious and indefatigable mechanician, Dr. Hooke, about the year 1681; as appears from Dr. Birch's History of the Royal Society, vol. iv. p. 102, and also from his Life and Posthumous Works, p. xxiii and 503, published by R. Waller, Esq; in 1705; but the angles, in his instrument, being measured by one reflection only, rendered it not so convenient for sea purposes as it would otherwise have been. The next who *published* any thing on this head, was John Hadley, Esq; Vice-president of the Royal Society, and at that time famous for having perfected, and brought into use, the reflecting telescope. This Gentleman, on the 13th of May 1731, presented to the Royal Society an instrument constructed in pretty near the same form that they now are, and also a description of the same; in which he gave a very full account both of the theory and manner of using this instrument: But although Mr. Hadley was the first who published, yet it is no less certain that the incomparable Sir Isaac Newton had long before that time invented an instrument of this kind, differing little from that of Mr. Hadley's, except in the manner of applying the telescope. But this, like many other of Sir Isaac's discoveries, was not publickly known till several years afterwards; namely, on the death of Dr. Halley in 1742, when a paper, in Sir Isaac's own handwriting, containing a description of the instrument, was found amongst the papers of that gentleman; and it was published, together with a drawing of the instrument, in N^o. 465 of the Philosophical

sophical Transactions for the year 1742. As there was no date to this paper, the exact time of Sir Isaac's discovery cannot now be ascertained: there is not, however, the least doubt of its being long prior to Mr. Hadley's in 1731, as Sir Isaac Newton died in 1727, and for some years before, had not thought much of these things; it is therefore matter of much surprize that Dr. Halley should not recollect, and produce this paper of Sir Isaac's, when Mr. Hadley's was publicly read; and thereby secure to his, then lately deceased, and ever to be admired friend, the prior invention of this most excellent instrument, to which he had, without doubt, an incontestible right. It is also most probable that Dr. Halley could have decided whether or not Sir Isaac's thought was prior to Dr. Hooke's in 1681, as Mr. Stone will have it in his Appendix to the Translation of Bion's Instruments; where he says, "The first of these instruments for taking the moon's distance from the sun, was invented long ago by Sir Isaac Newton, as appears in a paper of Sir Isaac's own hand-writing, found amongst those of the late Dr. Halley; and the very instrument itself, that Sir Isaac either made, or caused to be made, so long ago as when Dr. Halley went about making the catalogue of the stars in the Southern hemisphere, which was in the year 1672, was not long ago to be seen at Mr. Heath's in the Strand." But little dependence can be placed on what he has here advanced. That an instrument of this kind may have some time been made by Sir Isaac's direction, is very probable, but not at the time here mentioned: for in the first place, Dr. Halley did not set out for Saint Helena until the latter end of 1676; that is, at least four years after the time mentioned by Stone: and it is almost as certain, that when he did go, he had no instrument like this with him; because in his Tract entitled *Catalogum Stellarum Australium*, published after his return, in 1679, and which is now before me,

me, he gives a list of the instruments that he was provided with on that occasion, in which no instrument of the kind appears ; and it is scarcely to be credited that he would leave out of the catalogue an instrument which he must have found so useful, and that had been invented by so great a man, expressly on that occasion, and for the purpose of observing the moon's distance from the sun and stars, if any such instrument had at that time existed ; and more especially, as it is well known that the Doctor had always that method of finding the longitude much at heart, and he repeatedly mentions it in this publication *.

If this instrument was ever made at all for Dr. Halley, it is most probable that it was done about the time when he went, in the Paramore Pink, to observe the variation of the compass ; that is, in the years 1698, 1699, and 1700 : although I cannot help thinking that if he had then had any instrument of the sort, he would have left some account of its success in his journals, which, as far as I can find, he has not done.

The principle on which this most excellent instrument is founded, is so natural and obvious, that no less than five persons have come to my knowledge, exclusive of Dr. Hooke, who used but one reflection, that have invented and made it, independent of one another ; and that nearly in the same form. After Sir Isaac Newton and Mr. Hadley, or rather before the latter, Mr. Thomas Godfrey of Philadelphia, invented a quadrant to measure angles by reflec-

* Since writing the above, I have been informed that at the time when Mr. Hadley's paper was read, Dr. Halley did declare he had one of Sir Isaac Newton's, describing an instrument similar to Mr. Hadley's, and which was given to him in 1700, or 1701 ; but that he did not then know where to find it.

tion, which was sent to sea about the latter end of the year 1730; but I cannot find with what success, nor yet in what manner it was constructed, whether he used two reflections or only one. The next, in point of time, was the late Joseph Harris, Esq; sometime Warden of the Mint, and who, as I have been very credibly informed, invented an instrument of this sort, without knowing that any thing of the kind had been done before. And, lastly, it incontestably appears, from several letters to the late Rev. Mr. Rowning, that the same thing was again done, about the years 1752 or 1753, by Mr. George Holroyd, a very ingenious mechanician, then of the city of York, but now of Great Queen-street, Lincoln's-Inn-Fields, together with some ingenious improvements, which shall be mentioned hereafter.

But, notwithstanding these inventions of private gentlemen, which were laid aside as soon as the respective authors came to know what had been done by others, who had gone before them, few or no attempts were made towards improving the construction of this instrument from the time of its discovery by Mr. Hadley, until after the year 1745, about which time his patent ended; and the only contest among the generality of instrument-makers, after it got into their hands, was to try who could make it for the least money; which, it will readily be conceived, did not add much to its accuracy. Indeed, to such a deplorable state was this most excellent instrument reduced about the year 1750, that *M. De la Caille* assures us, in his *Ephemerides des Mouvements Celestes* for the years 1755 to 1765, two persons, observing at the same time, with two of the best quadrants that *they* had, and with the greatest care, would frequently differ 6, 7, and even 8 minutes, in the sun's altitude. We may indeed conclude, that either these instruments were made in France,

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or that proper care had not been taken in procuring them from good makers in England; for at all times instruments, sufficiently exact for observing altitudes, were to be had here, either from Mr. Jackson, who had made them for Mr. Hadley, under his patent; or, after his decease, from Mr. Bird.

The first persons, that I know of, who applied this quadrant to the actual measuring of distances, were Dr. Bradley, then Astronomer Royal at Greenwich, and Capt. John Campbell of the Royal Navy. The latter, about the year 1747, having, for his own amusement, measured the distances of several fixed stars with a quadrant of Jackson's making, shewed them to Dr. Bradley, who found them to correspond very exactly with their true distance in the heavens: and after this time, those gentlemen frequently made observations of the moon's distance from the sun and stars, and also of stars from one another, in company at Greenwich. In the course of these transactions, Dr. Bradley shewed Capt. Campbell an instrument, which had been contrived on purpose for making these observations by Mr. Hadley, and which was something like the Newtonian form; only the small speculum was made to slide in a groove, so as to stand either to the right or left of the great one, for the convenience of measuring the moon's distance from objects on both sides of her, without turning the plane of the quadrant downwards, as is now done, and which at that time was thought very inconvenient. Dr. Bradley had also by this time greatly improved Dr. Halley's Lunar Tables, and began to entertain great hopes of effecting thereby the so much wished-for method of finding the longitude at sea, by observations of the moon's distance from the sun and fixed stars; and the rather, as Mr. Bird had now begun to apply himself to improve the Hadley's Quadrant, in which,

which, the principal defect, then complained of, was its bending when inclined out of a vertical position; and he succeeded so well, that in the year 1750, the late ingenious Mr. Benjamin Robins made those observations with great success, in his voyage to the East Indies, with quadrants of only 7 inches radius.

The illustrious Sir Isaac Newton had, long before, laid the foundation of the Lunar theory in his *Philosophiæ Naturalis Principia Mathematica*: and about this time, many learned persons, both at home and abroad, turned their thoughts, either towards explaining and reducing that theory into tables, or to the making of observations for establishing those points which theory alone could not give; as well as for perfecting and examining the tables after they were made: for experience had by this time abundantly shewn, that accurate tables were not to be expected from theory alone. Amongst those who have exerted their talents this way, we may particularize the Rev. Dr. Bradley and Mr. Thomas Simpson at home; and the celebrated *Euler, Clairaut, Mayer, D'Alembert, Walmfley*, and many others, abroad. Of those who applied themselves to the practical part, none did so much as our countryman Dr. Bradley, whose skill, accuracy, and assiduity in the making of observations, undoubtedly left all his contemporaries far behind; but it must be owned, on the other hand, that the foreign mathematicians far outstripped us in the business of theory; owing, no doubt, to the diligence with which they have cultivated the modern method of analysis. Amongst those, none have distinguished themselves more than Messrs. *Euler, Clairaut, and Mayer*; and if the two former have, in some respects, shewn greater depths of mathematical knowledge, the last has been much more happy in a skilful arrangement of his tables, for the ease and expedition of computation.

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In consequence hereof, M. *Euler* published his Lunar Tables in the *Almanac Astronomique*, printed at Berlin for the year 1750; M. *Clairaut*'s Tables came out in the year 1752, in answer to the Prize Question, which had been proposed by the Imperial Academy of Petersburg in 1750; and M. *Mayer*'s, in the Gottingen Acts for 1753; in which he not only excelled both the former in ease and elegance of computation, but in exactness also; owing, perhaps, in some measure, to the use which he made of a number of Dr. Bradley's observations, that had been sent by the late Mr. Gael Morris to M. *Euler*; and by him given to M. *Mayer*. In these Tables, the errors in longitude no where amounted to more than two minutes: and having yet farther improved them in 1755, he sent them over to the Right Honourable the Lords Commissioners of the British Admiralty, with a claim to such part of the reward, offered by Parliament for the discovery of the longitude at sea, as they might be thought to deserve. He also sent over at the same time a drawing and description of an instrument for measuring angles by reflection; both of which are inserted at the end of his Lunar Tables, since printed by order of the Commissioners of Longitude. This instrument is chiefly calculated to obviate the errors which might arise in setting off the total arch in instruments less than a complete circle, as well as the irregularities that may happen in the intermediate divisions.

These Tables were very carefully compared by Dr. Bradley with a great number of observations of the moon, made by himself at Greenwich, with the new instruments; and he says, that "in more than 230 comparisons they no-where differed from the observed longitudes so much as one minute and an half." As this quantity included both the error of the Tables and that of the Observations
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also, Dr. Bradley inferred that the Tables must have generally given the moon's place true within little more than a minute of a degree, and therefore that the difficulty of finding the longitude at sea, by observations of the moon, so far as related to the accuracy of the Tables, was in a great measure happily got over, and that it only remained to prove whether or not the necessary observations could be made at sea with sufficient accuracy.

In consequence of this representation, the Commissioners of Longitude ordered two of Mr. Mayer's circular instruments to be made by Mr. Bird, and Captain Campbell, who had before given indubitable proofs of his skill and exactness in making observations of this sort, was desired to make trial of them at sea, as well as of Mr. Hadley's quadrant. Accordingly, this excellent observer, and also Mr. John Bradley, nephew to Dr. Bradley, and now second Master at the Royal Academy at Portsmouth, made a great many observations of the moon's distance from the sun and fixed stars, in the years 1757, 1758, and 1759; which were afterwards computed by Dr. Bradley, and found to correspond, in a most surprising manner with one another, and also with the longitudes of known places, within sight of the ship when the observations were made. In the course of these trials, it did not appear that the Hadleys quadrants were liable to any considerable errors, of the kind that Mr. Mayer's instrument was intended to remove; and as that instrument is very limited in the extent of its radius, without becoming heavy and inconvenient, it was then totally laid aside.

In this state were these matters situate in the year 1760, when all the learned Societies and Academies of Europe began to prepare for observing the Transit of Venus, over the Sun's disc, in 1761;

which our learned countryman, Dr. Edmund Halley, had, with immortal reputation to himself, foretold, and shewn the use which Astronomers might make of it, more than eighty years before it happened. This was a favourable opportunity for all those who were employed to make that important observation, and had the method of finding the longitude at sea by observations of the moon at heart, to exert themselves in reducing, and bringing it into practice: and in this respect none exerted themselves more, or with greater success, than our present Royal Astronomer, the Reverend Nevil Maskelyne. This ingenious and learned Gentleman, not only made a great number of those observations with success himself, but also so far convinced the officers of the several ships, which he sailed in, of the ease and certainty wherewith they could be made, and the utility they were of, that the method soon came almost universally into use in the East India Company's service, and has now been long established, as a branch of knowledge, absolutely necessary, in their naval officers. On his return home, he published the methods he had made use of, together with many excellent modes of abbreviating the computations, which at that time were tedious enough, and not to be effected with less than three or four hours labour by the most skilful computer, under the title of *The British Mariner's Guide to the Discovery of the Longitude at Sea*. In the same work he gave several methods, which before that time were not generally known, or made use of, for adjusting, and examining the Hadleys Quadrant with greater accuracy, as well as many other curious and useful hints, not so immediately relating to the subject before us, but which are nevertheless of great consequence to the mariner, and I believe now frequently used. Lastly, he recommended the publication of a Nautical Almanac, on a plan
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something similar to that which had formerly been suggested by *M. De la Caille*; on which account he presented his book to the Commissioners of Longitude for their concurrence therein.

In the mean time we had the misfortune to lose two of the greatest Astronomers that perhaps the world had ever produced, and who, of all men, had done most towards promoting and perfecting this method; namely, the Reverend Dr. James Bradley, Astronomer Royal at Greenwich, and Savillian Professor of Astronomy at Oxford, and Mr. Tobias Mayer, Professor of Oeconomy in the university of Gottingen, and author of the Lunar Tables, which have already been mentioned. The latter having been furnished with most excellent instruments, made by the late Mr. Bird, through the munificence of his late most gracious Majesty King George the Second, to the use of which he applied himself with unremitting ardour; had, by comparing his observations made therewith, as well as those which he had formerly received from his ingenious contemporary Dr. Bradley, with the numbers resulting from the theory, so far perfected the Lunar Tables before his death, that his widow was enabled to send over, in 1763, a set that did not differ more than one minute of a degree from any of Dr. Bradley's observations, except in a very few instances, most of which had been marked by the observer as very dubious observations; but in much the greater number, the errors did not amount to quite half a minute.

The comparisons of these new Tables with Dr. Bradley's observations were made by the late very ingenious Mr. Gael Morris; and who, by comparing the Tables which Mayer first sent over with Dr. Bradley's observations, and altering the maximums of the equation where the observations seemed most to require it, had at that
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time composed Tables of the moon's motions, which at all times give the moon's place in the Heavens to a very great degree of exactness: but having been indebted to Mr. Mayer both for his form and theory, he would never be prevailed on in his lifetime to let them be made public, lest they might be thought to interfere in the claim set up by that deserving Astronomer, to the reward granted by Parliament for the discovery of the longitude at sea.

The accuracy of the Tables, and the practicability of making the observations, being thus ascertained, many ingenious Gentlemen began to turn their thoughts towards reducing the length and difficulty of the computations; amongst whom, my truly worthy and ingenious friend, Mr. George Witchell, head-master of the Royal Academy at Portsmouth, was peculiarly happy in hitting on a device for throwing the whole of that part of the computation which relates to the reduction of the apparent to the true distance of the moon and stars, on account of parallax and refraction, into Tables; from whence it may, in many cases, be taken, almost at sight, and in the most troublesome ones by very easy proportions. This method was proposed to the Commissioners of Longitude in the month of September 1764, and so well approved of, that the Commissioners ordered him a gratuity of 300 *l.* and the tables to be computed and printed, which has since been done, with the addition of a column for correcting the effects of refraction, on account of the variable density of the atmosphere, under the inspection of the Rev. Dr. Anthony Shepherd, Plumian Professor of Astronomy and Experimental Philosophy in the University of Cambridge, and Master of Mechanics to his Majesty. By the help of these Tables, as I can from long experience assert, the abovementioned reduction may generally be made in about three minutes, and always in five.

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Mr. Witchell, at the same time, proposed the publication of a Nautical Almanac, and delivered in a plan on which it might be executed: and Messrs. Dunthorne and Lyons, very soon after, produced excellent Compendiums for abridging this reduction, by means of short tables and rules; and for which they were each of them rewarded with a gratuity of 50 l. and their methods ordered to be printed.

Very early in the spring of the year 1765, the Rev. Nevil Maskelyne being then returned from his voyage to Barbadoes, whither he had been, in consort with my brother-in-law, Mr. Charles Green, to make observations for the trial of Mr. Harrison's Time-keeper, and in which voyage they had both of them had abundant proofs of the possibility of making the lunar observations with ease and exactness, was, on account of his many eminent services to, and great skill in the science, made Astronomer-Royal at Greenwich, on the decease of the Rev. Mr. Bliss, who had succeeded Dr. Bradley in 1762: and having now a seat at the Board of Longitude, again pressed the publication of a Nautical Almanac, and backed the memorial, which he then delivered in, with the testimony of several gentlemen in the East India Company's service; who all concurred in declaring their opinions, that such a publication would be of the utmost utility to navigation. In consequence of these representations, the Commissioners applied to Parliament for authority to print and publish such an Almanac, which was granted by an act, made in the fifth year of the reign of his present Majesty; and in consequence thereof, proper persons were employed, and the first Almanac, of this kind, was computed and published for 1767, and they have been continued ever since; being published several years in advance for the benefit of those who make long
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voyages. The same act ordered a reward of 3000 l. to be given to the widow, or other representatives of the late Mr. Tobias Mayor, author of the Lunar Tables; and also 300 l. to the celebrated Mr. Euler, for what he had done in reducing Sir Isaac Newton's Theory of the Moon into neat analytical expressions, of which Mr. Mayer had availed himself, and from whence, by a very singular address of his own, had contrived to bring out the greatest quantities of the equations with ease and exactness.

But although matters were thus far happily advanced, it was not proposed to rest here. The Rev. Mr. Maskelyne having compared Mr. Mayer's last Lunar Tables with more observations, conceived hopes of bringing them to agree yet nearer with observation. Accordingly, with the approbation of the Board of Longitude, the equation tables were recomputed from numbers which he had reasons to think were nearer to the truth: he also directed that those tables should be continued to tenths of seconds, in order that fewer errors might happen from the omission of the fractional parts which arise in computation. These Tables have since been printed, and it is from them that the computations in the Nautical Almanac are now made. Moreover, two most excellent and accurate methods of reducing the observed distance of the moon from the sun, or a star, to the true, have been invented, and published in the Nautical Almanac for 1772. We are indebted for one of them to the Rev. Nevil Maskelyne, Astronomer-Royal; and for the other to Mr. George Witchell, Head Master of the Royal Academy at Portsmouth.

By these means, namely, the Nautical Almanac, and the several methods described above, of abridging the reduction of the apparent distance to the true, on account of parallax and refraction, the
computations

computations, attending this method of finding the Longitude, may be performed in 15 or 16 minutes by a very moderate computer; although formerly it could not have been done in less than three or four hours by the most skilful. But notwithstanding this, there yet remained many things to be done, and great difficulties to be got over. It had yet been practised by very few persons except such as were fond of Astronomical matters; and it could not be supposed that the generality of seamen, or even any considerable part of them, should be so: and it is not an easy matter to induce people, of any denomination, to take the trouble of putting in practice the schemes of other persons, unless they are previously well assured of their success, which was by no means the case here; as every seaman, without exception, had been taught, from his infancy, to look on these things as impracticable. The Right Honourable the Lords Commissioners of the Admiralty took every step in their power to encourage the practice of this method in the Royal navy; but notwithstanding this, it was rather fortunate that another transit of Venus was to be observed in 1769; which, together with the voyages, lately undertaken for discoveries towards the South, have carried many persons abroad, who, either by inclination or situation, were interested in its success, and of course exerted themselves in the practice of it; and their example has, perhaps, contributed more towards bringing it into use, than every thing else put together.

As the practice of this method became more extensive, many little defects were discovered in the instruments, which had either escaped notice before, or not been much attended to. Among these, the most material were the want of accuracy in the divisions of the arch, and the errors arising from a want of parallelism in the

the two surfaces of the glass speculums. The former, Mr. Bird had shewn might be avoided by a skilful workman, and received 500 l. from the Board of Longitude for his excellency therein; and it is now completely removed by Mr. Ramsden, by his curious invention of a machine for dividing circular arches in Astronomical instruments; and for which he, also, received a very handsome gratuity from the said Board. This machine divides with so much certainty and exactness, that a quadrant, which had been divided by his apprentice therewith in the presence of several of the Commissioners of Longitude, and afterwards examined with the utmost rigour by Mr. Bird, was found not to err, in any part, fifteen seconds of a degree; for Mr. Bird himself assured me, that if it had, he was certain of discovering it. The same ingenious Gentleman has now under consideration a machine, of a similar kind, for dividing straight lines with equal accuracy, certainty, and expedition.

The latter, namely, the errors arising from a want of parallelism in the two surfaces of the glasses, has also been well provided against, at least in the index-speculum, by the Rev. Mr. Maskelyne, our present Astronomer-Royal; and which he has described in some very interesting remarks on the Hadley's Quadrant, published in the Nautical Almanack for 1774. This most excellent improvement is effected by leaving the upper part of the index-speculum unsilvered, and making that part of the glass rough on the back, and covering it with a sort of black paint; whereby all the rays are absorbed, which are not reflected from the first surface; and which, I will be bold to say, is one of the greatest improvements that have been made to this instrument since its invention. Mr. George Holroyd, mentioned above as one of the inventors of Hadley's Quadrant, had also a thought of this kind for remedying these

these errors, as appears from a Quadrant, which I have seen, that was made for him by Mr. Dollond about the year 1765. I have also seen some contrivances, of the same Gentleman, for removing these errors, by making the speculums of a sort of opaque glass, and also of a composition somewhat resembling enamel, which might not, perhaps, be unworthy of a trial.

In the same paper, Mr. Maskelyne has given many excellent rules and directions concerning the size, height, and manner of silvering the glasses, the aperture of the telescope, and the means of adjusting it parallel to the plane of the quadrant; and he directed that two thick silver wires should be placed in the focus of the eye-glass of the telescope, dividing the diameter of the field of view into three equal parts, for that purpose: at the same time shewing many other useful purposes that these wires might be applied to.

I have observed before, that Mr. Bird was the first who applied perpendicular bars to support, or strengthen the plane of this quadrant: but the index being yet made of a broad, thin bar of brass; was liable to be bended, either towards, or from the plane of the quadrant, and of course the center-work was very much exposed to damage. To prevent this, the same Gentleman, first of any person that I know of, applied a perpendicular bar to the face of the index; which it was then supposed would render these very delicate parts of the instrument perfectly secure. But, such are the imperfections of the very best materials we are possessed of, that it was soon after discovered, the index of a Hadley's Quadrant, strengthened even in this manner, was yet liable to bend in the direction of its breadth, or, which is the same thing, in the direction of the plane

of the angle to be measured ; and that merely with the small force which is necessary to overcome the friction of the center-work ! A thing so incredible, that the late Mr. Bird, who certainly knew the instability of metals as well as any man, could not be persuaded of its possibility, until Capt. Campbell, who first discovered this defect, shewed it to him, by releasing the clamp which fastens down the index, and pushing the index gently along with his thumb ; when, on suddenly removing it, Mr. Bird saw, with his own eyes, the index spring back again to a very sensible distance. And this error will be very considerable indeed, if by any mischance the screw, that binds in the center-pin, should have been screwed up a little too tight. To prevent this, Mr. Bird, in all the quadrants which he made towards the latter part of his time, provided a thin, circular plate of hammered brass, beaten hollow on one side ; and cut, by many straight slits, from the circumference almost to the centre, where it was perforated, of a sufficient width, to receive the binding-screw of the center-work freely. This plate being put over the center-pin, with the hollow part towards the back of the quadrant, and the binding-screw put through the perforation into its place, the plate will then act as a spring against the back of the quadrant, and by its yielding prevent the center-work from being drawn too tight by the screw, and yet hold it with sufficient force to prevent any shake in it. But as there are many quadrants, which are not made in this manner, and as it is possible this apparatus may not always answer the purpose intended, so completely as might be wished for, I would advise every observer to move the index of his quadrant different ways between the observations ; that is, to set the objects open, and make them overlap, alternately. By these means they are brought into contact, by moving the index different ways ; and
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on that account, the errors arising from this cause will be alternately negative and affirmative; and of course, if an equal number be taken both ways, will nearly destroy one another. This method will also have a tendency to correct any errors, which might otherwise arise from a faulty habit, that the observer may have contracted, in forming the contact of the two objects, and is what I always used, without ever finding any bad consequence arising from it, but that of making the observations look a little irregular, which will be more or less according to the joint quantity of these two errors.

By such steps have the Instruments, as well as the practice of Nautical Astronomy, arrived to their present degree of perfection; and it fully appears from the preceding Narrative, how great a part is owing to the rewards held forth, and the generous encouragement given, by the Board of Longitude, to ingenious men of all denominations, for inventions and improvements, that in any way conduce to the advancement of Astronomy and Navigation; and also of what vast utility that institution has been of to these flourishing and opulent kingdoms.

As I have spoken rather warmly in favour of the method of finding the longitude by observations of the Moon's distance from the Sun and Fixed Stars, it may perhaps be expected that I should deliver my opinion concerning the accuracy wherewith they can be made, and what may be expected from the instrument of which I have said so much. It must be owned, there is yet something in the constitution of this Quadrant very disagreeable, and not easily to be accounted for. Sometimes, for many months together, the longitudes deduced from observations made about the same
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time with my two Sextants, would not differ more than 10 or 15 miles, and very seldom so much; after which the longitudes, so deduced, would begin to differ, and that difference would gradually increase, sometimes to more than a degree and an half: In a little time it would again decrease, and soon after the observations would agree as well as ever. It will readily be supposed, that no means were left untried by me to discover the cause of this strange aberration; but all my endeavours were ineffectual; and I mention the circumstance to induce some person, more skilful in mechanics, to attempt it.

With respect to the exactness that these observations may be made with, I shall beg leave to relate two plain matters of fact, which will shew what can be done in this respect, better than a thousand opinions. I reduced ten observations, all taken within the space of half a lunation before our arrival at the Cape of Good Hope, to that place, by means of Mr. Kendall's Watch; and also as many taken after leaving it, by the same means: the result of the former gave the longitude of the Cape Town $18^{\circ} 10'$ E., and of the latter $18^{\circ} 23\frac{2}{3}'$ E. Their mean is $18^{\circ} 16' 50''$ E.; differing $6' 25''$ from its true longitude, as determined by Messrs. Mason and Dixon. Again, the mean of four lunar observations, taken immediately before our arrival at St. Helena, gave its longitude $5^{\circ} 30\frac{1}{3}'$ W., when reduced thither by Mr. Kendall's Watch: four, taken immediately after leaving it, and reduced to that place in the same manner, gave its longitude $6^{\circ} 20'$ W. Their mean is $5^{\circ} 55\frac{1}{10}'$ W., which differs but $6' 6''$ from its true longitude, as found by the Rev. Mr. Maskelyne, by a great number of astronomical observations made on shore. I therefore conclude, that, with very little trouble, the longitude of a ship, at sea, may generally be had by this method, within
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about the one-sixth part of a degree, or at most, the one-fifth. —I shall now proceed to describe the rest of the instruments made use of in this expedition.

Of the Azimuth Compasses.

BESIDES that of Mr. Adams's making, which belonged to the Board of Longitude, and was of the late Dr. Knight's construction, we had two others, belonging to the ship. One of these also was of Dr. Knight's construction, and made by the same artist; and the other by Mr. Gregory, with some alterations of his own, consisting chiefly in the size of the instrument, the weight and strength of its parts, and their manner of suspension, which was on friction wheels: every one of these, I conceive, were conducive either to lessen its motion, or render it more regular, and of less effect. Indeed I must observe, that Dr. Knight's Compasses, as they are now made, are very defective in these particulars; seeing that the least motion of the ship throws them into disorder, and they are not readily made steady again, which renders them very troublesome to observe with, and perhaps not quite so accurate as they might otherwise be.

I cannot pass this article over without making a remark or two on the irregularities which we found in the Observations, made with these instruments. In the Channel of England, the extremes of the observed variations were from $19^{\circ}\frac{3}{4}$ to 25° : and all the way from England to the Cape of Good Hope, I frequently observed differences nearly as great, without being able, any way, to account for them; the difference in situation being by no means sufficient. These irregularities continued after leaving the Cape, which, at length, put me on examining into the circumstances under which

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they were made. In this examination it soon appeared, that when most of those observations were made, wherein the greatest West variations had happened, the ship's head was North and Easterly; and that when those, where it was least, had been observed, it was South and Westerly. I mentioned this to Captain Cook, and some of the Officers, who did not at first seem to think much of it; but as opportunities happened, some observations were made under those circumstances, and very much contributed to confirm my suspicions; and throughout the whole voyage I had great reasons to believe, that variations observed with a ship's head in different positions, and even in different parts of her, will differ very materially from one another; and much more will variations, observed on board different ships, which I now find fully verified, on comparing those which were made on board the Adventure with my own, made about the same time: and the inquisitive reader will find some very singular instances of these matters in the course of the following Observations.—The twelfth article does not require any account here.

Of the Dipping Needles.

THIS Instrument was made by Mr. Nairne, agreeable to a plan of the Rev. Mr. Mitchell, Fellow of the Royal Society; wherein the Needle may be balanced at any time, pretty exactly, but not without much time and trouble. This is done by means of four little balls, moving on two small wires; one of which is supposed to lie in a plane, passing through the axis of the Needle and its two poles, and the other in a plane at right angles thereto. By moving the balls of the latter, the common center of gravity of the balls and Needle, is brought into the plane which passes through

through the poles and axis of the Needle; and then, by moving the two former, into the axis itself.

The principal defects in this construction are, the difficulty in placing the wire, which carries the two last mentioned balls, in the proper plane; and the total impossibility of knowing, certainly, when it is so. Moreover, it is very possible, and undoubtedly often happens, that the axis of the Needle, and its two poles, do not lie in the same plane; in which case, another difficulty will arise in adjusting the Needle to great accuracy. It would certainly, I think, contribute towards removing these objections, if the breadth of the Needle was placed in the direction of its axis of rotation, both in this instrument, and also in the Azimuth Compass: but I speak this with submission to the opinions of better judges.

Of the Barometers and Thermometers.

THE two portable Barometers differed in no respect from common ones of that kind: but the construction of the Marine Barometer is curious, and deserves to be described. It was of that sort which we generally call Cistern Barometers: The cistern was a cylindric box of wood, with two circular holes in its top, one of near half an inch, and the other of near an inch diameter. Into the former of these, the tube is fitted so tight as not to admit the mercury beside it. The larger perforation is covered with a very fine piece of woollen cloth, which Mr. Nairne found had the property of admitting air through its pores, but not mercury. The tube was straight, and its bore rather small for something more than two feet; but above that, it was enlarged to the common size: The smallness of the tube, below, prevented the mercury from ascending so fast as it would otherwise

otherwise have done by the motion of the ship, and the width of the tube, above, prevented what did rise from having so sensible an effect as it would otherwise have had, on the motion of the mercury in that part of the tube. This Barometer was suspended on a common gimbal, about half-way up. I soon found that the motion of the ship had a very considerable effect on this instrument; and it seemed to me, that the motion of a Barometer, thus suspended, had a tendency to make the mercury stand somewhat higher than it would otherwise have done; and therefore the mean of the vibrations of the mercury, as put down in the following pages, will generally be greater than would be shewn by a barometer at rest. Mr. Nairne tells me, that he has since found by experiment, that a Barometer of this sort may be suspended, at such a height above the basin, that its motion will have a tendency to make its mean height less than it would be in a Barometer at rest; and from thence has been enabled to determine the point where it may be suspended, so that the mercury will neither have a tendency to ascend or descend; and of course in a barometer, thus suspended, the mercury will be perfectly at rest.

The Thermometers had nothing particular in them, farther than what is remarked at the end of the Meteorological Observations; but it would not be amiss if Thermometers, which are intended for expeditions of this sort, had a more extensive scale. The scale of those which I had extended from about 0 to 120.—The Theodolite, and Gunter's Chain, are too well known to need describing here.

The Wind gage has already been very fully described by its inventor, Dr. Lind, in the Philosophical Transactions, vol. lxxv. p. 353.
for

for the year 1775. Such an instrument would undoubtedly be very useful, if it could be made with a scale somewhat more extensive than that I made use of. In it, the water never rose more than nine-tenths of an inch in the strongest gusts, and would then vibrate from that point to nothing.

The apparatus for trying the heat of the sea-water at different depths, consisted of a square wooden tube, of about 18 inches long, and three inches square externally. It was fitted with a valve at the bottom, which opened inward, and another at its top, that opened outward, and had a contrivance for suspending the Thermometer exactly in the middle of it. When it was used, it was fastened to the deep-sea line, just above the lead, so that all the way as it descended the water had a free passage through it, by means of the valves, which were then both open; but the instant it began to be drawn up, both the valves closed by the pressure of the water, and of course the Thermometer was brought up in a body of water, of the same temperature with that it was let down to.

I come now to speak of the Time-keepers; three of which were made by Mr. John Arnold, and the fourth by Mr. Larcum Kendall, on the principles of that late most excellent artist, Mr. John Harrison. I have nothing to say concerning the principles on which they were constructed: these of the latter are now well known; and I am not acquainted with those of the former. The merits of each will be best seen from the observations themselves; and I have therefore no need to add any thing on this head. I wished to have given a short history of what had been done, this way, towards finding the longitude at sea; but, on examination, can find no certain accounts of what was done by the respective persons who have
n turned

turned their thoughts to this subject; and a bare recital of their names would be neither useful nor entertaining. I have therefore only to add, and I am certain it will be confirmed by every sea-faring Person who has experienced it, that a good machine of this kind is an inestimable companion at sea.

All the observations which were made on shore are put down literally as they were taken, that is, in the very numbers that were read off, and the times shewn by the clock: and, to avoid any errors that might happen in transcribing, the proof-sheets were all read by the original books. In delivering the observations which were made at sea, it was judged sufficient to give the means only, as the whole, in their original form, would have been too voluminous, and could answer no useful purpose, which will not now be equally fulfilled. Every mean was taken by two persons, separately, and carefully compared, and corrected, where necessary, by myself; so that, I hope, very few errors have crept in here. I have annexed the name of the observer to all those observations which were not made by myself, and taken care to specify such remarks as were made by him at the time of making them. The deductions from Mr. Bayly's observations were in general made by himself; and it is particularly mentioned where they are done by me, that he may not be blamed for errors which are not his own.

There are two or three characters made use of in this work, which it will be proper to explain, although they are now generally known to Astronomers.

: Signifies that the number, after which it stands, is, on some account or other, a little doubtful.

:: Placed

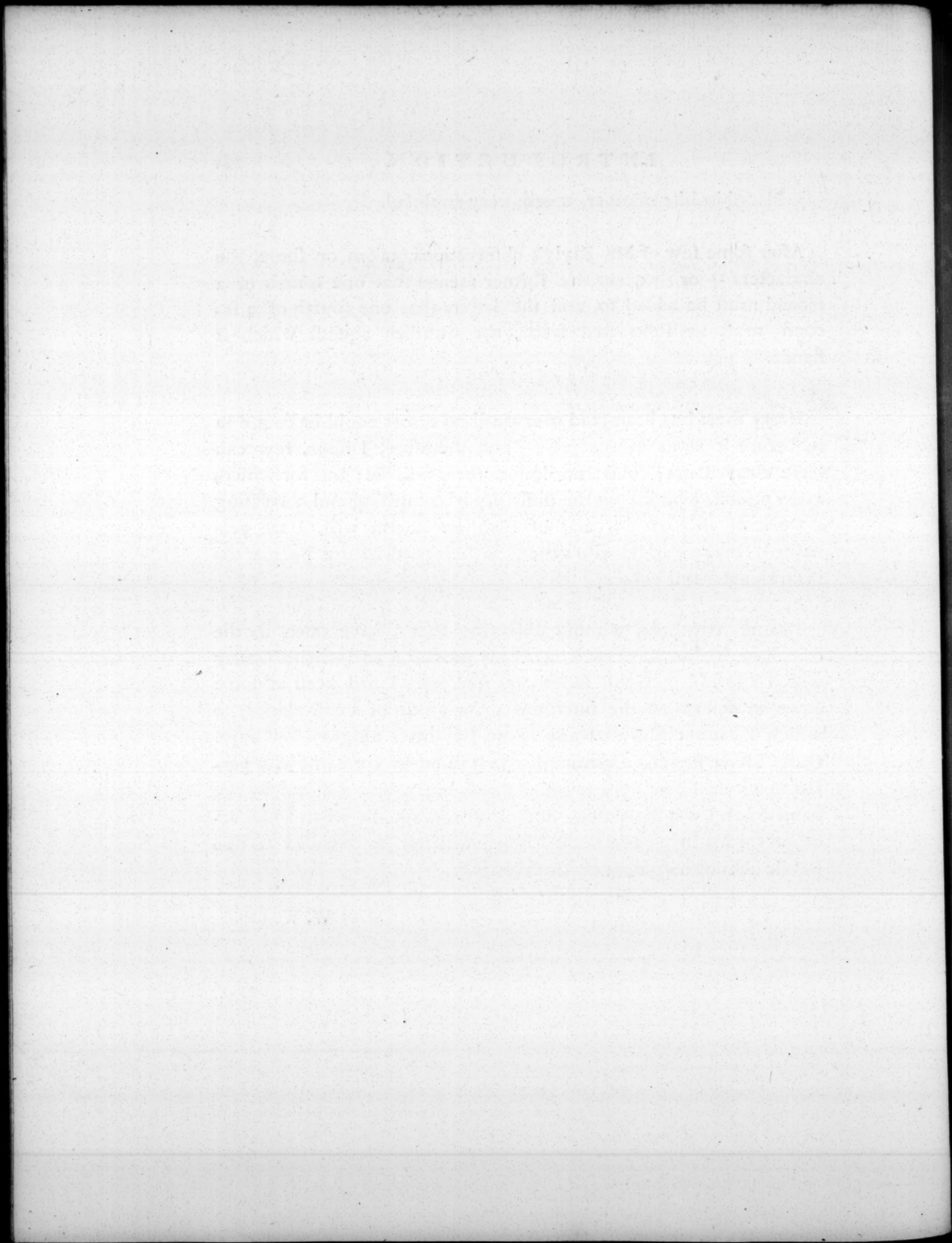
:: Placed in like manner, means very doubtful.

After some few of Mr. Bayly's observations, taken on shore, the characters + or — occur: the former means that one fourth of a second must be added to, and the latter, that one fourth of a second must be subtracted from, the number against which it stands.

Every sheet has been read over until no errors could be found in it, before it went to the press; and therefore, I hope, few can have escaped me: some, no doubt, there will be; but for which, every person, who knows the difficulty of compiling and correcting a work of this nature, and of such an extent, will, I am persuaded, make candid allowance, if his good-nature be not too far trespassed on.

I cannot conclude, without observing that I have once, in the course of this work, stepped out of my province, and taken a liberty which I would wish not to be censured for. I had been at some pains to determine the situations of a group of small islands, to which I cannot find that any name has been assigned by Capt. Cook: I have therefore ventured to call them by the name of a person to whom I owe very much indeed; one who took me by the hand when I was friendless, and never forsook me when I had occasion for his help; and who, I hope, will not be offended at this public acknowledgment of his favours.

W. WALES.



ASTRONOMICAL OBSERVATIONS,

MADE AT

Different Places on Shore.

B

RECEIVED OF THE SECRETARY OF THE

NAVY DEPARTMENT

ASTRONOMICAL OBSERVATIONS.

I

Observations on Drake's Island, in Plymouth Sound, by Mr. Bayley.

1772.	Times by the Clock of equal Altitudes.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	"	H	"	"	H	"
♂ June 30.	Set up the Clock marked C, and set it agoing; the pendulum being exactly of the same length as when going at Greenwich, when it lost at the rate of 0" 373 a day on Syderial time.					
♀ July 1.	38 18½	2 41 15	44 12	} 53 40 0		☉'s U. L. }
	41 40	2 44 37½	47 36			☉'s L. L. }
	59 29	3 2 29	5 31½	} 50 20 0		☉'s U. L. } Easterly.
	2 54½	3 5 54½	8 56			☉'s L. L. }
	At	7 20 29	Mr. Arnold's watch, No. 2, shewed 0 h. 55'.		6 45 02,4	Clock 1' 17" 4 bef. Syderial time.
	27 6	10 24 4	21 7½	} 50 20 0		☉'s L. L. }
	30 31	10 27 31	24 29			☉'s U. L. }
	48 18	10 45 20		} 53 40 0		☉'s L. L. } Westerly.
	51 42	10 48 33½	45 45			☉'s U. L. }
	41 25	1 45 22		} 63 20 0		☉'s U. L. }
44 45½			☉'s L. L. } Easterly. Very cloudy.			
♂ — 2.		2 17 2		} 58 9 0		☉'s U. L. }
	17 26	2				☉'s L. L. }
	At	7 4 57	No. 2 shewed 0 h 36' 0"		6 48 47,5	
	20 3	11		} 58 9 0		☉'s L. L. }
		11 20 25½				☉'s U. L. }
	52 39			} 63 20 0		☉'s L. L. } Westerly.
	56 0½	11 52 4				☉'s U. L. }
	41 21	1 44 18	47 16	} 64 0 0		☉'s U. L. } Easterly.
	44 43		50 40			☉'s L. L. }
	♀ — 3.	At	7 17 18	No. 2 shewed 0 h 45' 0"		6 52 34,5
	0 16		54 22	} 64 0 0		☉'s L. L. } Westerly.
	3 37½	12 0 39½	57 42			☉'s U. L. }
♂ — 4.	At	9 4 16	No. 2 shewed 2 h 28' 0"			
	28 9	1 31 8		} 67 24 0		☉'s U. L. } Easterly.
	31 32	1 34 31	37 31½			☉'s L. L. }
☉ — 5.	At	7 33 31	No. 2 shewed 0 h 54' 0"		7 00 08,6	Clock 6" 1 after Syderial time.
	28 32	12 25 34	22 35	} 67 24 0		☉'s L. L. } Westerly.
	31 55	12 28 56½				☉'s U. L. }
	26 25	1 29 24½	32 24½	} 68 20 0		☉'s U. L. }
	29 47½	1 32 49½	35 47½			☉'s L. L. }
	55 13	1 58 13		} 63 48 0		☉'s U. L. } Easterly.
	58 34½					☉'s L. L. }
	7 42	2 10 40	13 35½	} 61 50 0		☉'s U. L. }
	11 2	2 13 59½				☉'s L. L. }
♂ — 6.	At	7 17 58	No. 2 shewed 0 h 35' 0"		7 3 54,3	Clock 27" after Syderial time.

ASTRONOMICAL OBSERVATIONS.

Observations by Mr. Bayley, at Drake's Island, Continued.

1772.	Times by the Clock of equal Altitudes.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" " "	" " "	" " "			
July 6.	56 36 $\frac{1}{2}$	11 53 38	—	61 50 0		☉'s L. L.
	59 53	11 57 0	54 2 $\frac{1}{2}$			☉'s U. L.
	9 1 $\frac{1}{2}$	12 —	—	63 48 0		☉'s L. L.
	12 20 $\frac{1}{2}$	12 9 24 $\frac{1}{2}$	—			☉'s U. L.
	37 46	12 34 46 $\frac{1}{2}$	31 47	68 20 0		☉'s L. L.
		12 38 10	35 9 $\frac{1}{2}$			☉'s U. L.
8 — 8.	At	8 12 9	No. 2 shewed	1 h 22" 0		☉'s L. L.
	41 35	2 44 31	47 28	58 30 0		☉'s U. L.
	44 55	2 47 53	50 51			☉'s L. L.
		3 5 59	8 57 $\frac{1}{2}$	55 6 0		☉'s U. L.
	6 24	3 9 21 $\frac{1}{2}$	—			☉'s L. L.
24 — 9.					7 15 15.9	Clock 1' 23" after Syderial time.
	23 58	11 20 58	—	55 6 0		☉'s U. L.
		11 24 22 $\frac{1}{2}$	21 24 $\frac{1}{2}$			☉'s L. L.
	45 22	11 42 24 $\frac{1}{2}$	39 29	58 30 0		☉'s U. L.
	48 43 $\frac{1}{2}$	11 45 46 $\frac{1}{2}$	42 51			☉'s L. L.

Observations for the Latitude of the Place, by Mr. Bayley.

1772.	Zenith Distance.	Latitude.	Baro- meter.	Ther.	Phenomena.
July 1.	27 31 36	50 21 20	30,27	77	☉'s L. L.
2.	27 35 16 $\frac{1}{2}$	50 21 30 $\frac{1}{2}$	30,20	76	Ditto.
3.	27 41 16 $\frac{1}{2}$	50 21 31	30,23	63	Ditto.
7.	42 3 33	50 21 29	30,11	60	☉ Aquilæ.
	37 36 10	50 21 26 $\frac{1}{2}$	30,11	60	☉ Ophiuchi.
9.	28 19 8	50 21 35	30,00	76	☉'s L. L.

The mean is 50 21 28 $\frac{1}{2}$ N. Latitude.

The Clock's Rate of going.

1772.	Clock C. before Syderial Time.	Clock gains on Syd. time
July 1.	1 17,4	22,9
2.	0 54,5	20,7
3.	0 33,8	19,95
	After	
5.	0 6,1	20,9
6.	0 27,0	18,67
9.	1 23,0	

Mean Rate of losing 20,625

Observations at Drake's Island, Continued.

Observations of the Sun, Moon, and Stars, made with the Transit Instrument placed nearly in the Meridian.

1772.	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	Phenomena and Remarks.
	" "	" "	H. " "	" "	" "	
♂ July 7.	52 54 $\frac{3}{4}$	53 36 $\frac{1}{2}$	12 54 18 $\frac{1}{2}$	54 54	55 44 $\frac{1}{2}$	♂'s First Limb.
	22 17	22 59 $\frac{1}{2}$	17 23 43	24 25	25 8	α Ophiuchi.
	11 58	12 38 $\frac{1}{2}$	19 13 21	14 3	14 44	♂ Aquilæ.
	37 34	38 15 $\frac{1}{2}$	19 38 58 $\frac{1}{2}$	39 41	40 22 $\frac{1}{2}$	α Aquilæ.

It appears from the observations of α Ophiuchi and α Aquilæ, that the instrument was west of the true meridian 3' 37"; that is, it cut the Meridian in the Zenith under that angle: moved it a little to the eastward.

♂ — 8.	49 8	49 51	13 50 35 $\frac{1}{2}$	51 19 $\frac{1}{2}$	52 1 $\frac{1}{2}$	♂'s First Limb.
	2 41 $\frac{1}{2}$	3 25	14 4 9 $\frac{1}{2}$	4 54 $\frac{1}{2}$	5 37 $\frac{1}{2}$	Arcturus.
	30 32 $\frac{1}{2}$	31 14	15 31 55 $\frac{3}{4}$	32 38 $\frac{1}{2}$	33 19	α Serpentis.
		13 34	16 14 21 $\frac{1}{2}$	15 8 $\frac{1}{2}$		Antares.
			17 23 12			α Ophiuchi.
♂ — 9.	12 33 $\frac{3}{4}$	13 18 $\frac{1}{2}$	7 14 3 $\frac{1}{2}$			♂'s First Limb.
	14 49 $\frac{1}{2}$	15 35 $\frac{1}{2}$	16 21	17 6	17 51	♂'s Second Limb.

By comparing these observations of the Sun's Transit with the equal altitudes, it appears that the vertical, in which the instrument moved, after it had been altered on the 7th, made an angle with the true Meridian of 1' 46"; the southern semi-circle of that vertical lying so much to the eastward. The two transits of α Ophiuchi, when compared together, make the arch of the Horizon intercepted between the two verticals in which it moved, before and after the alteration, 4' 49"; and of course the angle, under which it cut the Meridian after the alteration, was 1' 12"; but the transits of the three stars Arcturus, α Serpentis, and Antares, when compared with their apparent right ascensions, make the angle only 23": the mean of the three is 1' 7" of a degree. It happened, very unfortunately, that no Observations, corresponding to these were made at Greenwich, nor by the late Dr. Bradley, in 1754, or 223 complete lunations before, namely, on June 27th and 28th: but I have endeavoured to correct the Tables from two Observations, made by that excellent Astronomer June 24th and 29th, and by comparing the right ascensions of the Moon, deduced from the preceding Observations, with the Tables so corrected, I make the Longitude of Drake's Island 4° 18' 52" W. of Greenwich. The Rev. Mr. Maskelyne, Astronomer Royal, by means of Martin's Map of Cornwall, and the situation of the Lizard Point, as given by Mr. J. Bradley's Observations, (See Preface to Nautical Almanack for 1771) makes the Longitude of Drake's Island 4° 13' 23" W. If I take 4° 16 $\frac{1}{2}$ ' W. the mean of these two determinations, it may perhaps be nearer than either, as both are in some measure uncertain.

Observations at Drake's Island, Continued.

The Clock, by which the times were taken, was fixed up very firmly to an oak plank, 11 inches broad, and $2\frac{1}{2}$ thick, let three feet into the ground, and well braced on each side. It was marked C, which is necessary to be noted, as some of the following Observations were taken by another which is marked B. The pendulum, all the time, vibrated $1^{\circ} 50'$ each way from the perpendicular.

All the computations were made by Mr. Bayley, except the times of apparent noon and rate of the Clock's going, which were recomputed by myself.

On Friday, July the 10th, in the evening, the three Time-keepers, N^o. 1, 2, 3, made by Mr. Arnold, were set agoing by himself, nearly to mean time; and I set that made by Mr. Kendall, on Mr. Harrison's principles, agoing also. At 13 h. 0' 6" by the Clock, the watches N^o. 1 and 2 shewed each of them 5 h. 45'; from whence Mr. Bayley computed that they were 12" too slow for mean time at this place. At 14 h. 15' by the Clock, Mr. Kendall's watch shewed 6 h. 59' 52"; and at 14 h. 28' Mr. Arnold's watch, N^o. 3, shewed 7 h. 12' 39"; from whence I computed, that the former was too fast for mean time by $7\frac{1}{10}$ ths of a second, and the latter too slow by $10\frac{1}{2}$ " at the times of comparison. N^o. 1 and 2 were taken on board the Adventure by Mr. Bayley; and N^o. 3, together with that made by Mr. Kendall, were carried by myself on board of the Resolution. The Rev. Mr. Maskelyne, Astronomer Royal, had previously found the rates of going of N^o. 1, 2, and 3, to be respectively gaining $4\frac{5}{8}$ ths of a second; gaining $14\frac{1}{5}$, and losing $14\frac{1}{6}$; and that the rate of Mr. Kendall's was $5\frac{8}{10}$ ths of a second a day losing, all on mean time: Mr. Bayley computed, from the preceding comparisons, that N^o. 2 got, while here only, $6''\cdot 057$ a day.

Observations for the Variation of the Compass.					Observations for the dip of the Needle's N°. End.			
1772.	Time by the Clock.	The Sun's Zenith Distance.	Magnetic azimuth.	Variation West.	1772.	Dip of the Needle's N°. End. Face of the Instrument.		
	H ' "	° ' "	° ' "	° ' "		East. ° ' "	West. ° ' "	
24 July 9.	Observed with a Compass made by Gregory.							
	13 45 30	77 9 36	N. 49 27 W.	20 37	2 July 10.	72 45	71 15	
	46 38	77 29 0	48 20	21 22		72 50	71 30	
	51 12	78 0 38	47 35	21 29		72 55	71 20	
	Observed with a Compass made by Adams.							
	13 54 48	78 35 0	N. 46 00 W.	22 21½	Means	72 50	71 21⅔	
	56 49	78 50 0	45 45	22 18		Mean of the two	72 5½	
	59 6	79 10 0	45 15	22 23				
	The mean of all is 21 45½							
	By placing the Compass in the meridian, and turning the index to the meridian mark, the variation was found to be				21 13⅔			
The mean of both is				21 29⅒				

ASTRONOMICAL OBSERVATIONS.

5

Observations made at the British Consul's House, at Fonchial, on the Island of Madeira.

1772.	Equal Altitudes: Time by the Clock marked B.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	H " "	" "	H " "	H " "	
24 July 30.	19 17:	4 21 22	—	} 59 40 0		☉'s U. L.
	21 50	23 58 $\frac{1}{2}$	26 4			☉'s L. L.
	32 24	4 34 29 $\frac{1}{2}$	36 35			☉'s U. L. } Easterly.
	34 57	4 37 5 $\frac{1}{2}$	39 11			☉'s L. L. }
♀ — 31.	49 58 $\frac{1}{2}$	12 47 52 $\frac{1}{2}$	45 46 $\frac{1}{2}$	} 56 40 0	8 42 33,28	☉'s L. L. } Easterly.
	52 28	12 50 24 $\frac{1}{2}$	48 19 $\frac{1}{2}$			☉'s U. L. } Easterly.
	21 53	4 24 0	26 5			☉'s L. L. } Easterly.
	24 29 $\frac{3}{4}$	26 36	28 41 $\frac{1}{2}$			☉'s U. L. } Easterly.
	33 1	4 35 7 $\frac{1}{4}$	37 14	} 57 20 0	8 45 49,88	☉'s L. L. } Easterly.
	35 37	37 44	39 51			☉'s U. L. } Easterly.
1/2 Aug. 1.	55 50	12 53 46	51 43			☉'s L. L. } Easterly.
	58 22	56 19	54 13 $\frac{1}{2}$			☉'s U. L. } Easterly.
	6 59 $\frac{1}{2}$	13 4 55	—	} 59 40 0		☉'s L. L. } Easterly.
	9 31	7 26	5 22			☉'s U. L. } Easterly.

Hence it appears that the Clock lost 36",6 a day on Syderial time.

1772.	Observed by Mr. Bayley. Time by the Clock marked C.	Zenith Distance.	Time of passing the Meridian.	Phenomena and Remarks.
♀ July 31.	At 13 h. 31' 39 $\frac{1}{4}$ " by B, it was 13 h. 31' 0" by C. At 22 h. 24' 0", the Clock B shewed 22 h. 24' 54"			
	31 48 $\frac{1}{2}$ 16 34 8 $\frac{1}{2}$ 36 29 $\frac{1}{2}$ }		19 36 32,8	α Aquilæ, Eastward.
	41 18 $\frac{3}{4}$ 22 38 56 $\frac{1}{2}$ 36 35 }			α Aquilæ, Westward.
	29 31 3 31 47 $\frac{1}{2}$ 34 4 $\frac{1}{4}$ }	70 21 0		☉'s U. L.
	32 5 $\frac{1}{2}$ 3 34 21 $\frac{1}{2}$ 36 36 $\frac{3}{4}$ }			☉'s L. L.
	43 2 3 45 17 $\frac{3}{4}$ 47 34 }	67 33 0		☉'s U. L.
	47 52 50 4 $\frac{1}{4}$ }			☉'s L. L.
	2 52 4 5 7 $\frac{3}{4}$ 7 23 $\frac{1}{4}$ }	63 25 0		☉'s U. L.
	5 25 $\frac{3}{4}$ 7 40 $\frac{1}{2}$ 9 53 $\frac{1}{2}$ }			☉'s L. L.

At 4 h. 58' 55 $\frac{1}{2}$ " by C, it was 5 h. by B.

Observations at Fonchial, Continued.

1772.	Equal Altitudes: Time by the Clock C.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	H ' "	H ' "	H ' "			
½ August 1.	At 8 h. 44' 49 $\frac{1}{4}$ " B shewed 8 h. 46' 0".				8 44 40,2	
	23 42	13 21 27	19 13 $\frac{1}{2}$	63 25 0		☉'s L. L.
	26 15	24 0	21 46			☉'s U. L.
	—	13 41 17	39 1 $\frac{3}{4}$	67 33 0		☉'s L. L.
	46 1	43 46	41 35 $\frac{1}{2}$			☉'s U. L.
	—	13 54 43	52 27 $\frac{1}{2}$	70 21 0		☉'s L. L.
	—	57 17	—			☉'s U. L.

Hence the Clock C seems to have lost at the rate of 1' 15" a day on Syderial time.

Whilst we were here, the Thermometer stood from 74° to 72 $\frac{1}{2}$ °.

All the computations were made by myself.

The Observations were made at the house of the British Consul, which is about 200 yards, nearly due east, from the place where the late Dr. Thomas Heberden made his Observations.

The Clocks stood on a brick floor, and were screwed fast to a large book-case, full of books, and which was fastened in a very firm manner to the wall of the house.

The pendulum of B vibrated 1° 40' on each side of the perpendicular, and that of C 1° 53'.

Comparisons of Mr. Kendall's Watch with the Clock B.			Comparisons of Mr. Arnold's Watch (No. 3.) with the Clock B.		
1772.	Time by B.		1772.	Time by B.	
	H ' "	Time by K. H ' "		H ' "	Time by A. H ' "
♀ July 31.	9 35 38	1 50 0	♀ July 31.	9 36 37 $\frac{1}{2}$	1 35 0
	13 39 0	5 52 47		13 40 21	5 38 0
	4 44 18 $\frac{1}{4}$	20 56 0		4 42 0	20 37 0
	8 28 50	12 40 0		8 26 39 $\frac{1}{2}$	0 21 0
½ August 1.	14 4 37	6 15 0	½ August 1.	14 6 42	6 0 0
Comparisons of Mr. Arnold's Watch (No. 1.) with the Clock C.			Comparisons of Mr. Arnold's Watch (No. 2.) with the Clock C.		
1772.	Time by C.		1772.	Time by C.	
	H ' "	Time by A. H ' "		H ' "	Time by A. H ' "
♀ July 31.	9 33 13 $\frac{1}{2}$	1 47 0	♀ July 31.	9 34 0 $\frac{3}{4}$	2 42 0
	13 35 40	5 49 0		13 37 29	6 45 0
	8 33 46	0 45 0		8 35 39 $\frac{1}{2}$	1 41 0

Observations at Fonchial, Continued.

If r be put for the Clock's gain on the Watch in any given time (a) shewn by the Clock, as for example, between any two times of comparison, v for the time shewn by the Clock, between the comparison and nearest apparent noon, and A for the time by the Watch when the comparison was made; then I say that the time shewn by the Watch at the apparent noon, or time of the sun's centre being on the meridian, will be expressed by $A \pm v \mp \frac{vr}{a}$: the upper signs having place when the comparison is made before, and the lower ones when it is made after noon; but if the Watch goes faster than the Clock, it will be just the contrary; and by making use of this formula, and computing from the above Observations, and comparisons of the Time-keepers therewith, I find that the several rates of the three, made by Mr. Arnold, and marked No. 1, 2, and 3 were, gaining $2''$, 31 , gaining $55''$, 89 , and losing $56''$, 9 on mean time in 24 h.; and that the Watch made by Mr. Kendall, on Mr. Harrison's principles, was losing $1''$, 77 on mean time in the same space.

Observations at the Cape of Good Hope.

1772.	Equal Altitudes. Time by Clock marked B.			Zenith Distance.	Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	H " "	H " "	H " "			
☉ Nov. 1.	45 58 48 36 $\frac{1}{2}$	10 48 14 50 54 $\frac{1}{2}$	53 10 $\frac{1}{2}$	53 9 0		☉'s U. L. } Easterly. ☉'s L. L. } W. B.
☽ — 2.	14 51 17 29 $\frac{1}{2}$	18 12 33 $\frac{1}{2}$ 18 15 14	10 19 $\frac{1}{2}$	53 9 0	14 31 36,7	☉'s L. L. } West ^{er} ly. ☉'s U. L. }
♂ — 3.	0 26 $\frac{1}{4}$ 2 55 $\frac{1}{2}$ 16 44 $\frac{1}{2}$	10 2 33 $\frac{1}{4}$ 5 12 $\frac{1}{4}$ 19 0 $\frac{1}{2}$	4 49 7 28 $\frac{1}{4}$ 21 16	63 24 0 60 0 0		☉'s U. L. } Easterly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. }
♀ — 4.	57 36 11 27 20 15 22 55	18 52 42 18 55 21 $\frac{1}{2}$ 19 9 9 $\frac{1}{2}$ 19 11 47 $\frac{1}{2}$ 10 22 33 $\frac{1}{2}$ 25 10	50 27 53 4 $\frac{3}{4}$ 6 54 $\frac{1}{4}$ 9 32 $\frac{1}{4}$ 27 24 $\frac{1}{2}$	60 0 0 63 24 0 59 40 0	14 37 2,4 14 39 42,8	☉'s L. L. } Westerly. ☉'s U. L. } Exceed- ☉'s L. L. } ing strong ☉'s U. L. } wind. ☉'s U. L. } Easterly. ☉'s L. L. }
☾ — 5.	56 48 $\frac{1}{2}$ 59 25	18 54 30	52 14 54 52	59 40 0		☉'s L. L. } Westerly. ☉'s U. L. }
♀ — 6.						

ASTRONOMICAL OBSERVATIONS.

Observations at the Cape of Good Hope, Continued.						
1772.	Equal Altitudes. Time by the Clock marked B.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	" "	" "			
♀ Nov. 6.	5 1	10 7 19	9 35 $\frac{1}{2}$	63 40 0		☉'s U. L.
	7 41	9 57 $\frac{1}{2}$	12 13 $\frac{1}{4}$			☉'s L. L.
	16 20	10 18 35	20 53			☉'s U. L.
	18 58	21 13 $\frac{1}{2}$	23 30			☉'s L. L.
♂ — 7.					14 45 13,76	
	11 45	19 9 28 $\frac{1}{2}$	7 12 $\frac{1}{2}$	61 20 0		☉'s L. L.
	14 24 $\frac{1}{2}$	12 8	9 50 $\frac{1}{2}$			☉'s U. L.
	23 3	19 20 46	18 29 $\frac{3}{4}$	63 40 0		☉'s L. L.
	25 41 $\frac{1}{2}$	23 25	21 9 $\frac{3}{4}$			☉'s U. L.
	6 12	10 8 28 $\frac{1}{2}$	10 44 $\frac{1}{2}$	63 51 0		☉'s U. L.
	8 50	10 11 6	13 22 $\frac{1}{2}$			☉'s L. L.
	23 37 $\frac{1}{2}$	10 25 53 $\frac{1}{2}$	28 9 $\frac{1}{2}$	60 15 0		☉'s U. L.
	26 15	10 28 32 $\frac{1}{2}$				☉'s L. L.
☉ — 8.					14 48 0,71	
	10 2	19 7 45		60 15 0		☉'s L. L.
	12 38 $\frac{1}{2}$	10 23 $\frac{1}{4}$	8 7 $\frac{1}{2}$			☉'s U. L.
	27 27 $\frac{1}{2}$	19 25 11	22 55	63 51 0		☉'s L. L.
	30 6 $\frac{1}{4}$	27 49 $\frac{1}{2}$	25 32 $\frac{1}{4}$			☉'s U. L.
	41 14 $\frac{1}{2}$	11 43 32	45 51 $\frac{1}{2}$	44 40 0		☉'s U. L.
	43 54 $\frac{1}{2}$	46 14	48 31 $\frac{1}{2}$			☉'s L. L.
	52 45 $\frac{1}{2}$	11 55 2 $\frac{3}{4}$	57 23	42 20 0		☉'s U. L.
	55 28 $\frac{1}{2}$	57 47 $\frac{3}{4}$	0 5			☉'s L. L.
♂ — 9.					14 50 46,45	
	46 16 $\frac{1}{4}$	17 43 58	41 39	42 20 0		☉'s L. L.
	48 59 $\frac{1}{2}$	46 41	44 21			☉'s U. L.
	57 47 $\frac{1}{2}$	17 55 29 $\frac{1}{2}$	53 12	44 40 0		☉'s L. L.
	0 28	58 11	55 52 $\frac{1}{2}$			☉'s U. L.
	23 25 $\frac{1}{4}$	10 25 40 $\frac{1}{2}$	27 59 $\frac{1}{2}$	61 10 0		☉'s U. L.
	26 3 $\frac{1}{2}$	28 20 $\frac{1}{4}$	30 37			☉'s L. L.
♂ — 10.					14 53 36,82	
	21 24	19 19 7 $\frac{1}{2}$	16 51 $\frac{1}{4}$	61 10 0		☉'s L. L.
	24 2 $\frac{3}{4}$	21 47	19 30 $\frac{1}{4}$			☉'s U. L.
♂ — 11.						
	58 23 $\frac{1}{2}$	10 0 41 $\frac{1}{4}$	2 57	67 12 0		☉'s U. L.
	1 3	10 3 20 $\frac{1}{2}$	5 36 $\frac{1}{2}$			☉'s L. L.
	9 5 $\frac{1}{4}$	10 11 22 $\frac{1}{2}$	13 38	65 0 0		☉'s U. L.
		10 14 2 $\frac{1}{4}$				☉'s L. L.
♂ — 12.					14 59 11,36	
		19 44 35 $\frac{3}{4}$		65 0 0		☉'s L. L.
	49 33	47 16 $\frac{1}{2}$	44 58 $\frac{3}{4}$			☉'s U. L.
	57 35 $\frac{1}{2}$	19 55 18 $\frac{1}{2}$	53 1 $\frac{1}{8}$	67 12 0		☉'s L. L.
	0 16	57 59 $\frac{1}{4}$	55 41 $\frac{1}{4}$			☉'s U. L.

ASTRONOMICAL OBSERVATIONS.

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Observations at the Cape of Good Hope, Continued.

1772.	Equal Altitudes. Time by Clock B.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
		H		H		
24 Nov. 12.		12 39 58 $\frac{1}{2}$		35 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
2 — 13.	40 22				15 2 2 $\frac{1}{8}$	
	23 52	17		35 0 0		☉'s L. L. } Westerly. ☉'s U. L. }
	3 15	10 5 32 $\frac{1}{2}$	7 50 $\frac{1}{4}$	67 6 0		☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	5 55 $\frac{1}{2}$	8 14 $\frac{1}{4}$	10 29 $\frac{1}{2}$	64 0 0		☉'s L. L. }
	18 23 $\frac{1}{4}$	10 20 39	22 56	64 0 0		☉'s U. L. }
2 — 14	21 2 $\frac{1}{2}$	23 19 $\frac{1}{4}$	25 35 $\frac{3}{4}$		15 4 52,7	☉'s L. L. } W. B. ☉'s U. L. }
	48 57	19 46 40 $\frac{1}{4}$	44 24	64 0 0		☉'s L. L. } Westerly. ☉'s U. L. }
	51 37	49 20 $\frac{1}{2}$	47 3 $\frac{1}{4}$	67 6 0		☉'s L. L. }
	4 5	20 1 48	59 31 $\frac{1}{4}$			☉'s U. L. }
	6 45 $\frac{1}{2}$	4 28 $\frac{1}{4}$	2 11 $\frac{1}{4}$			

Observed times when the Sun's and Moon's Limbs, and fixed Stars transited the Meridian; together with the Comparisons of the Clocks with each other.

1772.	Time by the Clock marked C.					
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
			H			
28 Nov. 3.	At 10 h. 9' 22" by B, it was 10 h. 9' 0" by C.					
2 — 4.			14 35 49	36 34	37 16 $\frac{1}{2}$	☉'s First Limb. } ☉'s Second Limb. }
	36 38 $\frac{1}{2}$	37 20 $\frac{1}{2}$	38 5 $\frac{1}{4}$	38 49 $\frac{1}{2}$	39 31	
	At 14 h. 41' 0" by B, it was 14 h. 40' 35 $\frac{1}{2}$ " by C.					
	At 19 h. 1' 26" by B, it was 19 h. 1' 0" by C.					
	38 21 $\frac{1}{4}$	39 3 $\frac{1}{2}$	22 39 45 $\frac{3}{4}$	40 29 $\frac{1}{4}$	41 11	☉'s First Limb. } ☉ Pegasi.
		48 59	22 49 42 $\frac{1}{4}$	50 25 $\frac{1}{2}$		
24 — 5.	At 10 h. 41' 32 $\frac{3}{4}$ " by B, it was 10 h. 41' 0" by C.					
	At 14 h. 50' 35 $\frac{1}{4}$ " by B, it was 14 h. 50' 0" by C.					
	23 31 $\frac{1}{2}$	24 13	23 24 56 $\frac{1}{4}$	25 39	26 20 $\frac{1}{2}$	☉'s First Limb. } ☉ Pegasi.
		55 30	23 56 13 $\frac{1}{4}$	56 57 $\frac{1}{2}$		☉ Andromeda. } W. B. ☉ Andromeda.
		2 39	0 3 27 $\frac{1}{2}$	4 16 $\frac{1}{2}$		
		20 38	0 21 27	22 15 $\frac{1}{2}$		
2 — 6.	At 11 h. 0' 0" by B, it was 10 h. 59' 11 $\frac{1}{2}$ " by C.					
		40 5 $\frac{1}{2}$	14 40 49 $\frac{3}{4}$	41 33 $\frac{1}{2}$	42 16 $\frac{1}{2}$	☉'s 1st L. cloudy. } W. B. ☉'s 2d L.
	41 37 $\frac{1}{2}$	42 21				
	At 14 h. 52' 0" by B, it was 14 h. 51' 9 $\frac{1}{2}$ " by C.					

Observations at the Cape of Good Hope, Continued.

1772.	Transits of the Sun, Moon, and Stars over the Meridian. Time by the Clock C.					Phenomena and Remarks.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	" "	" "	H " "	" "	" "	
♀ Nov. 6.	45 50 $\frac{1}{2}$ 45 17 $\frac{1}{2}$ 53 19 8 21	46 31 $\frac{3}{4}$ 45 59 $\frac{3}{4}$ 54 2 $\frac{1}{2}$ 9 2 $\frac{3}{4}$	21 22 46 43 23 54 45 $\frac{1}{2}$ 0 9 45 $\frac{5}{8}$	47 56 $\frac{1}{4}$ 47 26 $\frac{1}{2}$ 55 29 $\frac{5}{8}$ 10 29	48 36 $\frac{3}{4}$ — — 11 10 $\frac{1}{2}$	α Aquarii. α } Pegasi. γ } δ's First Limb.
At 0 h. 14' 0" by B, it was 0 h. 13' 3 $\frac{1}{2}$ " by C.						
	46 6 $\frac{3}{8}$	46 50 $\frac{3}{4}$	1 47 36 $\frac{1}{2}$	48 22 $\frac{1}{2}$	—	α Arietis.
At 10 h. 26' 1 $\frac{1}{2}$ " by B, it was 10 h. 25' 0" by C.						
♂ — 7.	41 52 $\frac{1}{2}$ —	42 36 44 51	14 43 19 $\frac{1}{4}$ 45 35	44 3 $\frac{1}{2}$ 46 19 $\frac{1}{2}$	— 47 1 $\frac{3}{4}$	☉'s First Limb. ☉'s Second Limb.
At 14 h. 51' 0" by B, it was 14 h. 49' 56" by C.						
At 19 h. 27' 7 $\frac{1}{4}$ " by B, it was 19 h. 26' 0" by C.						
	44 19 $\frac{1}{4}$ 47 1 $\frac{1}{2}$ —	45 1 $\frac{1}{4}$ 47 48 52 31	21 45 43 $\frac{1}{2}$ 23 48 35 $\frac{1}{4}$ 23 53 14 $\frac{1}{2}$	46 26 49 23 53 53	47 7 $\frac{1}{2}$ 50 9 $\frac{1}{4}$ —	α Aquarii. α Andromeda. γ Pegasi.
	53 23	54 6	0 54 48	55 30 $\frac{1}{4}$	56 13 $\frac{1}{4}$	δ's First Limb.
At 0 h. 59' 0" by B, it was 0 h. 57' 47" by C.						
At 10 h. 15' 18 $\frac{3}{4}$ " by B, it was 10 h. 14' 0" by C.						
This forenoon we examined and adjusted the line of collimation of the instrument, and at noon endeavoured to bring it into the plane of the Meridian, by keeping the Sun's first limb at the middle wire, until the Clock shewed the time at which it ought to pass it according to computation; but the screw which turns the instrument round in azimuth was too fine to keep pace with the Sun's diurnal motion: Mr. Bayley then noted its transit at the following wires.						
☉ Nov. 8.	— 46 30 $\frac{1}{4}$	— 47 13 $\frac{1}{4}$	14 14 47 57 $\frac{1}{2}$	46 26 48 42	47 8 $\frac{1}{2}$ —	☉'s First Limb. ☉'s Last Limb. } W. B.
At 19 h. 17' 24 $\frac{1}{4}$ " by B, it was 19 h. 16' 0" by Clock C.						
At 12 h. 11' 32 $\frac{1}{4}$ " by B, it was 12 h. 10' 0" by C.						
Moved the Transit Instrument yet nearer to the Meridian, and fixed up two Meridian marks, one at about a mile and a half, and the other about half a mile distant.						
♂ Nov. 9.	— —	47 29 $\frac{3}{4}$ 49 45 $\frac{1}{2}$	14 48 13 $\frac{1}{4}$ 50 30	48 57 $\frac{3}{4}$ 51 14	— —	☉'s First Limb. ☉'s Second Limb.
At 14 h. 54' 0" by B, it was 14 h. 52' 27" by C.						
At 18 h. 1' 34 $\frac{1}{4}$ " by B, it was 18 h. 0' 0" by C.						
	40 28 41 15 Cloudy.	41 10 $\frac{1}{2}$ 41 59 $\frac{1}{2}$ 26 51 $\frac{1}{2}$	22 41 54 1 42 44 $\frac{3}{4}$ 2 27 39 $\frac{1}{2}$	42 38 $\frac{1}{2}$ 43 30 $\frac{1}{2}$ 28 23 $\frac{1}{2}$	43 20 44 14 $\frac{1}{2}$ 29 5 $\frac{1}{4}$	α Pegasi. α Arietis. δ's First Limb.
At 2 h. 39' 0" by B, it was 2 h. 37' 21 $\frac{1}{2}$ " by C.						
At 10 h. 18' 42" by B, it was 10 h. 17' 0" by C.						

ASTRONOMICAL OBSERVATIONS.

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Observations at the Cape of Good Hope, Continued.

1772.	Transits of the Sun, Moon, and Stars, over the Meridian. Time by the Clock C.					Phenomena and Remarks.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	" "	" "	H. " "	" "	" "	
8 Nov. 10.	49 24 51 40 $\frac{1}{2}$ 42 9 $\frac{1}{4}$ 47 4 $\frac{3}{4}$ 39 48 $\frac{1}{2}$ 35 46 $\frac{1}{4}$ 15 3 $\frac{3}{4}$ 17 11 $\frac{1}{4}$ 8 10 $\frac{3}{4}$	50 7 $\frac{1}{2}$ 42 56 $\frac{1}{4}$ 47 47 $\frac{1}{4}$ 40 33 $\frac{1}{4}$ 36 27 $\frac{1}{2}$ 15 47 $\frac{1}{2}$ 17 55 $\frac{1}{2}$ 8 53 $\frac{1}{2}$	14 50 51 $\frac{1}{2}$ 53 7 $\frac{5}{8}$ 23 43 43 $\frac{3}{4}$ 23 48 30 $\frac{5}{8}$ 1 41 18 $\frac{5}{8}$ 2 37 9 $\frac{1}{4}$ 3 16 32 $\frac{1}{2}$ 18 40 $\frac{3}{8}$ 4 9 37 $\frac{3}{8}$	51 36 53 52 44 31 $\frac{5}{8}$ 49 14 $\frac{1}{4}$ 42 4 $\frac{5}{8}$ 17 17 $\frac{5}{8}$ 19 25 $\frac{1}{4}$ 10 21 $\frac{1}{2}$	54 35 45 17 $\frac{3}{4}$ 49 56 $\frac{1}{4}$ 42 48 $\frac{5}{8}$ 38 32 $\frac{1}{2}$ 18 0 $\frac{3}{4}$ 20 8 $\frac{1}{4}$ 11 4 $\frac{1}{8}$	☉'s First Limb. ☉'s Second Limb. α Andromeda. γ Pegasi. α Arietis. α Ceti. ♄'s First Limb. ♄'s Second Limb. Aldebaran.
At 10 h. 41' 51 $\frac{1}{4}$ " by B, it was 10 h. 40' 0" by C.						
8 — 11.	52 1 54 17 $\frac{1}{4}$	52 44 $\frac{1}{4}$ 55 1 $\frac{1}{2}$	14 53 28 $\frac{3}{4}$ 55 45 $\frac{1}{4}$	56 30 57 12 $\frac{1}{4}$		☉'s First Limb. ☉'s Second Limb.
At 15 h. 1' 0" by B, it was 14 h. 59' 6 $\frac{3}{4}$ " by C. At 10 h. 18' 0" by B, it was 10 h. 16' 0" by C.						
24 — 12.	54 41 57 41 $\frac{1}{2}$	55 24 $\frac{1}{4}$ 57 41 $\frac{1}{2}$	14 56 8 $\frac{1}{4}$ 14 58 25 $\frac{1}{2}$	56 52 $\frac{5}{8}$ 59 10 $\frac{1}{4}$	59 52 $\frac{1}{4}$	☉'s First Limb. ☉'s Second Limb. } W. B.
At 15 h. 7' 2" by B, it was 15 h. 5' 0" by C. At 20 h. 2' 4" by B, it was 20 h. 0' 0" by C.						
	36 57 $\frac{1}{2}$ 59 35 $\frac{1}{2}$ 25 13 $\frac{1}{4}$	37 42 $\frac{3}{4}$ 0 20 $\frac{1}{4}$ 25 54 $\frac{3}{8}$	1 38 28 5 1 5 $\frac{1}{2}$ 5	39 14 $\frac{1}{4}$ 1 51 $\frac{1}{2}$ 27 19 $\frac{1}{2}$	39 57 $\frac{3}{4}$ 28 0 $\frac{3}{4}$	α Arietis. ♄'s Second Limb. α Orionis. } W. B.
At 5 h. 8' 8" by B, it was 5 h. 6' 0" by C. At 12 h. 56' 11 $\frac{3}{8}$ " by B, it was 12 h. 54' 0" by C.						
8 — 13.	57 19 0 19 $\frac{1}{2}$	58 2 $\frac{1}{2}$ 0 19 $\frac{1}{2}$	14 58 46 $\frac{1}{2}$ 15 1 3 $\frac{3}{4}$	59 30 $\frac{3}{4}$ 1 47 $\frac{3}{4}$	2 31	☉'s First Limb. ☉'s Second Limb.
At 15 h. 7' 0" by B, it was 15 h. 4' 47 $\frac{1}{4}$ " by C.						
	23 47 52 29 15 47	24 28 53 13 $\frac{1}{4}$ 16 30 $\frac{3}{4}$	5 25 10 $\frac{1}{2}$ 5 53 57 $\frac{1}{2}$ 6 17 14:	25 53 $\frac{1}{4}$ 54 44 $\frac{1}{2}$ Cloudy.	26 34 55 28	α Orionis. ♄'s Second Limb. Sirius.
At 6 h. 24' 0" by B, it was 6 h. 21' 40" by C. At 10 h. 27' 21 $\frac{1}{3}$ " by B, it was 10 h. 25' 0" by C.						
6 — 14.	59 59 $\frac{1}{4}$ 3 0 $\frac{1}{4}$	0 42 $\frac{3}{4}$ 3 0 $\frac{1}{4}$	15 1 26 $\frac{3}{4}$ 15 3 44 $\frac{1}{4}$	2 11 $\frac{3}{4}$ 4 29 $\frac{1}{2}$		☉'s First Limb. ☉'s Second Limb. } W. B.
At 15 h. 7' 23 $\frac{1}{2}$ " by B, it was 15 h. 5' 0" by C. At 20 h. 7' 27" by B, it was 20 h. 5' 0" by C.						
	40 23 $\frac{3}{8}$ 45 5 $\frac{3}{4}$	6 41 7 $\frac{1}{2}$ 6 45 45 $\frac{1}{4}$	41 51 $\frac{3}{4}$			{ Supposed 51 ft of Gemino. See Bri- tish Catalogue. 2da ad λ Gemino. } W. B.

Observations at the Cape of Good Hope, Continued.						
1772.	Transits of the Sun, Moon, and Stars, over the Meridian. Time by the Clock C.					Phenomena and Remarks.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	" "	" "	H " "	" "	" "	
½ Nov. 14.	— — 6 43½	46 37¾ 0 8½ 7 25¼ 11 26⅝	6 47 33¼ 7 0 58⅞ 7 8 7⅜ 12 14½	48 9¼ 1 48⅜ — 13 2¾	— — 9 30¾ —	D's Second Limb. Castor. Procyon. Pollux. } W. B.
At 7 h. 18' 32½" by B, it was 7 h. 16' 0" by C.						
At 10 h. 38' 34" by B, it was 10 h. 36' 0" by C.						
☉ — 15.	2 38½ — 5 39½	3 21¾ — 6 23¾	15 4 6½ — 7 8½	4 50½ — 7 51½	— — 7 51½	
At 15 h. 13' 0" by B, it was 15 h. 10' 23½" by C.						

Observations for the Variation of the Compass.

1772.	Time by the Clock B.			The Sun's magnetic azimuth.	Variation West.		Variation West.	Variation West.
	H	"	"		°	'	°	'
♀ Nov 13.	20	20	37	N. 79 55 W.	20	1	21 30	20 50
		22	56	80 0	20	13	21 0	20 30
		24	31	80 0	20	25	21 10	21 0
½ — 14.	20	30	30	81 10	19	53	21 15	20 40
		32	39	81 15	20	4 $\frac{1}{2}$	21 0	21 20
		33	20 $\frac{1}{2}$	81 40	19	45	21 20	21 10
		33	56	81 50	19	19 $\frac{1}{2}$	21 15	21 20
		34	58	82 5	19	29 $\frac{1}{2}$	20 30	21 5
		35	11 $\frac{1}{2}$	82 15	19	24	20 20	20 50
	20	39	29	82 35	19	37 $\frac{1}{2}$	20 40	20 40
		40	12	83 0	19	17	20 20	21 5
		41	2	81 5	21	18 $\frac{1}{2}$	20 25	20 50
		42	52	81 20	21	17 $\frac{1}{2}$	20 10	20 35
		43	44	83 40	19	4 $\frac{1}{2}$	20 57	20 55
		44	44	83 45	19	6 $\frac{1}{2}$	The variations contained in these two columns, were got by placing the compass in the meridian, and turning the index to the meridian mark.	
		45	35	83 45	19	13		
		46	22	81 15	21	50		

The mean of all the variations found from the time, is 19° 57' 35"; the mean of all those taken by the Meridian mark, is 20° 55' 4"; and the mean of both is 20° 26 $\frac{1}{3}$ West.

Observations at the Cape of Good Hope, Continued.

Computations of the Rates at which the two Clocks went.

1772.		Time of appa- rent Noon by Clock B.	Syderial Time of apparent Noon.	Clock B flow of Syderial Time.	Clock B loses on Syderial Time.	Clock C loses on B.	Clock C loses on Syd. time.
		H " "	H " "	" " "	" " "	H	
D	Nov. 2.	14 31 36,7	14 32 41,4	1 4,7	1 14,8		
8	— 4.	14 37 2,4	14 40 36,7	3 34,3	1 18,5	10,8	
u	— 5.	14 39 42,8	14 44 35,6	4 52,8	1 14,6	{ 15,2	
b	— 7.	14 45 13,8	14 52 35,7	7 21,9	1 14,4	{ 13,5	
o	— 8.	14 48 0,7	14 56 37,0	8 36,3	1 16,5	17,4	
D	— 9.	14 50 46,4	15 0 39,2	9 52,8	1 12,6	11,6	
8	— 10.	14 53 36,7	15 4 42,1	11 5,4	1 16,9	9,3	
u	— 12.	14 59 11,4	15 12 50,7	13 39,3	1 14,8	{ 10,7	
8	— 13.	15 2 2,1	15 16 56,2	14 54,1	1 15,8	10,7	
b	— 14.	15 4 52,7	15 21 3,6	16 9,9		10,7	
Mean Rate of the Clocks					1 15,43	11,92	1 27,35

Computations of the Rate at which Mr. Arnold's Watch (N^o. 1.) went, by Mr. Bayley.

1772.		Time by the Watch No. 1.	Time by the Clock C.	Clock C before Watch No. 1.	Watch loses on the Clock between Compa- rison.	Interval of com- parison.	Watch loses on the Clock in twenty- four hours.	Clock loses on Syde- rial time.	Watch loses on Syderial time.	Watch loses on mean time.
		H " "	H " "	H " "	" " "	H " "	" " "	" " "	" " "	" " "
8	Nov. 4.	22 6 0	14 48 0	16 42 0	2 54	24 6	2 53,3	1 29,0	4 22,3	0 25,8
u	— 5.	22 12 0	14 56 54	16 44 54	2 48	24 11	2 46,6	1 29,1	4 15,7	0 19,2
8	— 6.	22 23 0	15 10 42	16 47 42	2 45½	23 14	2 50,9	1 29,1	4 20,0	0 23,5
b	— 7.	21 37 0	14 27 27½	16 50 27½	2 43½	24 2	2 43,5	1 32,8	4 16,3	0 19,8
o	— 8.	21 39 0	14 32 11	16 53 11	2 53½	24 27	2 50,3	1 25,8	4 16,1	0 19,6
D	— 9.	22 6 0	15 2 4½	16 56 4½	2 50½	24 1	2 50,5	1 25,8	4 16,3	0 19,8
8	— 10.	22 7 0	15 5 55	16 58 55	2 50½	23 55	2 51,1	1 26,1	4 17,2	0 20,7
8	— 11.	22 2 0	15 3 45½	17 1 45½	2 51½	24 1	2 51,5	1 26,1	4 17,6	0 21,1
u	— 12.	22 3 0	15 7 37	17 4 37	2 52	24 19	2 49,6	1 25,9	4 15,5	0 19,0
8	— 13.	22 22 0	15 29 29	17 7 29	2 45	23 42	2 47,2	1 25,9	4 13,1	0 16,6
b	— 14.	22 4 0	15 14 14	17 10 14	2 48½	24 0	2 48,5	1 25,9	4 14,4	0 17,9
o	— 15.	22 4 0	15 27 2½	17 13 2½						—
Mean Rate of the Watch (N ^o . 1.)										0 20,3

Mr. Bayley farther computes, that at the time when this Watch was compared with the Clock, on November 4, it was too slow for mean time, at the Cape, by 1 h. 49' 9", 1.

Observations at the Cape of Good Hope, Continued.

Comparisons of the Transit Instrument with equal Altitudes.

1772.	Time of the ☉'s Transit by the Clock C.	Clock B before C.	Time of the ☉'s Transit by the Clock B.	Time of appa- rent Noon by the equal Al- titudes.	☉ tran- sits after Noon.	Horizon- tal Error of the In- strument.
	H ' "	' "	H ' "	H ' "	"	' "
8 Nov. 4.	14 36 57,30	0 24,46	14 37 21,76	14 37 2,4	19,36	14 51
h — 7.	14 44 27,31	1 3,96	14 45 31,27	14 45 13,8	17,47	14 0½
	Altered the Instrument.					
3 — 9.	14 49 21,54	1 33,00	14 50 54,54	14 50 46,4	8,14	6 43
24 — 12.	14 57 16,95	2 1,94	14 59 18,89	14 59 11,4	7,49	6 28
9 — 13.	14 59 55,09	2 12,7	15 2 7,79	15 2 2,1	5,69	4 59
h — 14.	15 2 35,85	2 23,5	15 4 59,35	15 4 52,7	6,65	5 55

Of the Dip of the Magnetic Needle.

The dipping Needle which we took on shore at this place was so much out of balance, and so difficult to get in again, that, notwithstanding we both of us spent all the leisure time we had from other observations, we did not get it perfectly adjusted before we went away; and of course were not able to get any observations of that kind at this time.

ASTRONOMICAL OBSERVATIONS.

Observations made at Dusky Bay, in New Zealand.

1773.	Equal Altitudes. Times by Clock B.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
☉ April 4.	59 58 4 3	22 22	6 31½	65 20 0	I 4 36,4	☉'s U. L. } Easterly. ☉'s L. L. }
☽ — 5.	—	4 1 18	2 6	65 20 0		☉'s L. L. } Westerly. ☉'s U. L. }
	I 10	22 4 25: 8 26	7 38½	66 0 0	I 8 20,0	☉'s U. L. } Easterly. ☉'s L. L. }
♂ — 6.	10 51 14 55	4 7 34 11 39½	8 26	66 0 0		☉'s L. L. } Westerly. ☉'s U. L. }
☿ — 10.	45 47½ 49 26 4 21 8 14 21 25 25 29	21 48 45½ 52 30 22 7 30 11 24 22 24 45 28 49	51 46½ — — — 28 5 32 7	72 20 0 — — — 67 20 0	I 26 50,9	☉'s L. L. } Easterly. ☉'s U. L. }
☉ — 11.	27 38 31 41 44 53 48 44 3 36 7 19 14 38: 19 16	4 24 13 28 22 4 41 46 45 37½ 5 0 35 4 19 23 18 26 23 9	20 58 25 4 — — 1 21 22 15 27 4	67 20 0 — 69 40 0 — 72 20 0 65 20 0	I 49 17,5	☉'s L. L. } Westerly. ☉'s U. L. }
♀ — 1.	—	—	10 58 16 47	65 20 0		☉'s L. L. } Easterly. ☉'s U. L. }
☿ — 17.	35 52½ 39 55½	22 39 12 43 11½	42 25½ 46 27	71 0 0	I 53 4,75	☉'s L. L. } Westerly. ☉'s U. L. }
☉ — 18.	5 37¾ 9 40	5 2 23½ 6 24	59 9 3 11	71 0 0		☉'s L. L. } Easterly. ☉'s U. L. }
The Clock stopped a few seconds in winding up.						
	—	23 8 28 12 53:	—	68 0 0	I 56 41,9	☉'s U. L. } Easterly. ☉'s L. L. }
☽ — 19.	9 16½	4 39 57:	—	68 0 0		☉'s L. L. } Westerly. ☉'s U. L. }
	37 43 41 41	22 40 57½ 44 55½	40 55: 44 10 ½ 48 11	72 20 0		☉'s U. L. } Easterly. ☉'s L. L. }

Observations at Dusky Bay, Continued.

1773.	Equal Altitudes. Times by Clock B.			Zenith Distance.	Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	H " "	" "	" "	H " "	
☽ April 19.	11 7 $\frac{1}{2}$	23 14 41	18 19	68 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
☽ — 20.	15 31	19 12	22 50 $\frac{1}{2}$			
	44 53	4 41 14	37 36 $\frac{1}{2}$	68 0 0		☉'s L. L. } ☉'s U. L. } Westerly.
	49 20	45 45	42 9			
	18 44	5 15 29		72 20 0		☉'s L. L. } ☉'s U. L. }
	22 39	19 28	16 13			
	38 45 $\frac{1}{2}$	22 41 57	45 8	73 0 0		☉'s U. L. } ☉'s L. L. } Easterly.
	42 40	45 54	49 9			
		23 15 27	19 1 $\frac{1}{2}$	68 40 0		☉'s U. L. } ☉'s L. L. }
	16 16	19 54	23 32			
☽ — 21.				68 40 0	2 4 17,8	☉'s L. L. } ☉'s U. L. } Westerly.
	51 44 $\frac{1}{2}$	4 48 7 $\frac{1}{2}$	44 29 $\frac{1}{2}$			
		52 35	49 0	73 0 0		☉'s L. L. } ☉'s U. L. }
		5 22 8 $\frac{1}{2}$	18 54 $\frac{1}{2}$			
	29 16	26 4 $\frac{1}{2}$	22 54	66 0 0		☉'s U. L. } ☉'s L. L. } Easterly.
☽ — 24.	26 15 $\frac{1}{4}$	10 30 28 $\frac{1}{2}$	34 47 $\frac{1}{2}$			
	31 27	35 48 $\frac{3}{4}$	40 14 $\frac{1}{2}$	66 0 0	12 44 41,7	By Mr. Kendall's Watch. ☉'s L. L. } Westerly. ☉'s U. L. }
☉ — 25.						
	57 24:	14 53 1 $\frac{3}{4}$	48 36 $\frac{3}{4}$	66 0 0		
	2 36:	58 24	54 4 $\frac{1}{2}$			

In these last Observations the time was noted by the Watch made by Mr. Kendall, the Clock having been taken down on the 22d.

1773.	Meridian Zenith Distances of the Sun and Stars.							Barom.	Thermom.	Phenomena and Remarks.
	Interior Arch.			Exterior Arch.						
	°	'	"	G	S	V	"			
☾ April 5.	51	37	10	55	0	8	+ 11	29 96	54	☉'s U. L.
♂ — 6.	51	33	34	54	3	31	+ 24	30 35	51	Procyon.
☉ — 11.	54	24	28	58	0	4	+ 20	30 13	54	☉'s L. L.
	51	33	10	54	3	31	+ 21	30 18	50	Procyon.
	0	52	54	0	3	24	— 24	30 19	50	γ Navis plane of the Quadrant West.
	23	0	0	24	2	5	+ 6	30 18	48½	β Navis above the Pole.
♂ — 15.	55	50	56	59	2	9	+ 26	29 99	53	☉'s L. L.
♀ — 16.	55	40	20	59	1	17	+ 22	30 4	58	☉'s U. L.
	51	33	14	54	3	31	+ 18	29 98	49	Procyon.
	0	53	4	0	3	26	0	29 97	48½	γ Navis } Plane of the Quadrant East.
	8	5	16	8	2	17	+ 20	29 96	48	♂ —
	22	59	38					29 96	47½	β — above the Pole.
☉ — 18.	56	22	14	60	0	17	+ 20	29 95	58¾	☉'s U. L.

Observations at Dusky Bay, Continued.

1773.	Meridian Zenith Distances of the Sun and Stars.							Barom.	Thermom.	Phenomena and Remarks.
	°	'	"	G	S	V				
☉ April 18.	51	33	28	55	0	0	+ 10	29 90	52	Procyon.
	0	53	26	0	3	24	— 10	29 90	51 $\frac{1}{4}$	γ Navis } Plane of the Quadrant West.
	8	5	50	8	2	16	— 9	29 90	50 $\frac{3}{4}$	δ — } above the Pole.
	22	59	38	24	2	4	+ 4	29 90	50 $\frac{1}{2}$	β — } above the Pole.
♁ — 21.	8	5	40	8	2	15	0	29 65	46	δ Navis plane of the Quadrant West.
	22	59	18	24	2	3	+ 20	29 65	45	β — } above the Pole.
♂ — 22.	58	16	41	62	0	21	+ 19	29 67	53	☉'s L. L.
	0	52	45	0	3	25	0	29 66	45	γ Navis } Plane of the Quadrant East.
	8	5	21	8	2	17	+ 22	29 66	45	δ — }

In making the above Observations, I estimated the seconds on both arches by the eye, on account of a defect in the tangent screw of the astronomical quadrant, or the apparatus which carries it, I could not discover which; the screw being liable, sometimes, to turn half way round without altering the vernier.

N. B. This is the same quadrant which Captain Cook and Mr. Green used at Otaheite, and possibly got injured when in the hands of the natives; if this was the case, it is highly probable that the disagreement in their meridian zenith distances (See p. 406, Philosophical Transactions, vol. LXI.) arose from this cause.

Lunar Observations for the Longitude of the Place.

1773.	Time by the Clock.	Distance ☉ and ♄'s Limbs.	Zenith Distance ♄'s L. L.	Double Alt. of ☉'s L. L.	Barom.	Thermom.	Longitude East.			
	H " "	° ' "	° ' "	° ' "			° ' "			
♄ April 14.		+ 1 35½	+ 12	Corrections of the Quadrants.						
	0 7 42	78 1 45	54 10 0	}	29,99	52	166 27 45			
	9 37	78 0 45	54 35 45							
	13 10	77 57 30	55 3 0							
	16 7	77 57 0	55 31 45	}	29,99	52	166 24 45			
	18 31	77 56 0	55 57 0							
	21 2	77 56 0	56 21 0							
		+ 1 39½	+ 12	Corrections of the Quadrants.						
♄ — 17.		+ 0 30½	+ 12	Ditto						
	21 34 44	43 46 45	46 36 15	}	29,94	51½	166 3 18			
	38 30	45 0	19 45							
	40 12	44 30	9 30							
	41 44	44 30	3 0							
	44 0	43 0	45 51 0							

ASTRONOMICAL OBSERVATIONS.

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Observations at Dusky Bay, Continued.

Lunar Observations.

1773.	Time by the Clock.	Distance $\odot$ and ν 's Limbs.	Zenith Distance ν 's L. L.	Double Alt. of $\odot$'s L. L.	Barom.	Thermom.	Longitude East.	
	H " "	° ' "	° ' "	° ' "			° ' "	
$\frac{1}{2}$ April 17.	21 48 21	43 41 45	45 30 0	} 11 45 2 45 44 54 15 + 12	29.94	51½	166 24 3	
	52 34	41 15	11 45					
	54 38	40 30	2 45					
	56 46	40 0	44 54 15					
		+ 0 36½	+ 12	Corrections of the Quadrants.				
	0 32 25	42 53 0	46 36 0	60 47	29 95	58	166 4 10½	
	37 24	50 15	47 5 30	61 25				
	39 22	50 0	15 45	61 40				
	41 36	50 0	27 30	61 54				
	44 24	48 45	43 45	62 12	29 95	58	166 24 55½	
	55 23	46 0	48 51 0	63 29				
	58 6	45 0	49 7 0	63 47				
	I 0 20	43 45	26 0	64 5				
	3 16	43 0	41 0	64 14	29 95	58	166 24 55½	
	5 23	42 30	54 15	64 25				
				+ 12	-10 15 Corrections of the Quadrants.			
	$\odot$ — 18.	19 18 38	60 30 0	74 16 15	} 73 26 0 72 50 15 72 12 0 71 37 0	29 87	43	165 18 21
23 58		32 0	73 26 0					
27 45		33 0	72 50 15					
31 33		34 0	72 12 0					
35 25		36 0	71 37 0	} 70 52 30 70 23 15 69 55 0 69 26 0	29.87	43	165 14 45	
40 4		37 0	70 52 30					
43 14		37 30	70 23 15					
46 22		39 0	69 55 0					
49 24		40 30	69 26 0	} + 12				
		- 15	+ 12	Corrections of the Quadrants.				

The mean of all these Observations gives the Longitude of the Observatory $166^{\circ} 2' 46\frac{1}{2}''$ E.
If the Observations of the ν 's distance from α Aquilæ be rejected, it will be $166^{\circ} 18' 9''$ East.

Observations at Dusky Bay, Continued.

Observations for finding the Variation of the Compaſs.

1773.	Zenith Diſt. ☉'s U. L.	Azimuth of the ☉'s center.	Double Altit. of the ☉'s L. L.	Vari- ation East.
h April 17.	Knight's Compaſs.	N. 17 35 E. 17 25 17 30 17 20 17 0	56 20 56 29½ 56 36 56 45 56 52	12 38½
Correction of the Quad. + 0 34'				
D — 19.	80 30¼ 79 40½ 79 18 78 54 78 40¼ 70 36¼ 70 16 69 57¼ 69 42¾ 69 17¾	N. 47 55 E. 46 25 45 30 45 25 47 0 N. 34 35 E. 35 15 33 50 34 10 32 20	By another Knight's Compaſs. Gregory's Compaſs.	15 6¼
g — 21.	69 26¾ 69 46¼ 70 0½ 70 14 70 27¾ 70 43¾	N. 60 10 W. 60 45 60 30 60 50 61 0 64 0	Gregory's Compaſs.	14 5½
+ 12" Correction of the Quad.				

* * Between every one of theſe Obſervations, except thoſe in the firſt ſet, I turned the compaſs quite round, ſometimes one way, and ſometimes the other; a precaution which, I am convinced from experience, is neceſſary to be taken by thoſe who would obtain the true quantity of the variation by an azimuth compaſs on ſhore.

Observations of the Dip of the Magnetic Needle.

	Face of the Instrument.		
	East.	West.	
h April 13.	71 5 70 20 70 35 70 40	70 45 70 20 70 0 70 21½	Means.
Changed the Poles.			
	70 45 70 0 70 15 68 10 68 0	71 35 71 0 71 50 69 35 69 30	Means.
Altered the balancing			
D — 19.	69 20 69 5 70 10	69 35 69 0 69 0	Means.
g — 20.	69 31½ 70 10 69 35 69 0 70 10	69 11½ 70 5 69 5 68 55 70 30	Means.
Changed the Pole.			
g — 21.	72 5 72 5 70 39½ 70 4½ 70 5,6	71 10 71 35 70 13½ 70 7½	Mean of all the means. Mean of the two, or Dip of the Needle's S. End.

The Needle was not readily balanced here; but it was done with much leſs trouble than at the Cape of Good Hope, owing, probably, to the change in the dip being leſs between that place and this than between that and England, or poſſibly from its having contracted leſs ruſt.

Observations at Dusky Bay, Continued.

Observations on the Tides.

1773.	Apparent Time.	Time by the Clock.	Water below a certain Mark.	Remarks.	1773.	Apparent Time.	Time by the Clock.	Water below a certain Mark.	Remarks.
	H	H	F. I.			H	H	F. I.	
♂ April 6.		23 30	2 4	High Water.	♂ April 10.		4 25	4 5	
♀ — 7		2 44	6 11				4 33	4 8	
		2 49	7 1					10 0	Low Water, Evening.
	4 28 46	5 41 ¹	10 5	Low Water.	☉ — 11			10 1 ¹	Ditto, Morning.
		8 33	7 1					3 2	High Water, Aftern.
		8 40	6 11					9 8	Low Water, Morning.
		9 26	5 4				0 37	7 2	
		9 32	5 2				0 44	7 1	
		9 40	4 11				1 37	5 9	
	10 57 1	12 10 ¹	2 10	High Water.			1 45	5 6	
		14 41	4 11				1 52	5 3	
		14 49	5 2				4 13 ¹	3 6	High Water.
		14 56 ¹	5 4		♂ — 12.	2 42 52	6 33	5 3	
		21 58 ¹	4 11				6 40	5 6	
		22 20	4 6				6 50	5 9	
		22 36	4 0				7 57	7 2	
		22 45	3 8					9 4	Low Water, Morning.
♂ — 8	23 1 35	0 17 ¹	2 8	High Water.	♂ — 13		3 58	4 5	
		1 54	3 8				4 4	4 3	
		1 59	4 0				4 16	4 0	
		2 17	4 6			3 32 2	5 3 ¹	3 8	High Water.
		2 28	4 11				5 45	4 0	
			10 6	Low Water.			6 2	4 3	
		10 58	4 4				6 14	4 5	
		11 11	3 11				21 13	6 7	
		11 26	3 6				21 29	6 10	
		11 37	3 3				21 42	7 1	
	11 27 10	12 45	2 6	High Water.	♀ — 14.	22 22 51	0 0 ¹	8 10	Low Water.
		13 50	3 3				2 23	7 1	
		14 4	3 6				2 34	6 10	
		14 21	3 11				2 48	6 7	
		14 36	4 4				4 30	4 10	
	17 37 47	18 56 ¹	10 5	Low Water,			4 40	4 7	
		23 9	4 6				4 52	4 4	
		23 16	4 4				6 29	3 6	High Water.
		23 22	4 2			4 50 11	8 4	4 4	
		23 32	3 11				8 19	4 7	
	23 53 19	1 12 ¹	2 8	High Water.			8 29	4 10	
♀ — 9.		2 55	3 11		♂ — 15.			3 11	High Water.
		3 3	4 2				0 25	7 3	
		3 9	4 4				0 31	7 5	
		3 16	4 6				0 47	7 9	
			10 6	Low Water, Evening.	♀ — 16.	0 44 29	2 30 ¹	8 4 ¹	Low Water.
			10 1	Low Water, Morning.			4 10	7 9	
This forenoon the tube got moved out of its place by some means or other; I replaced it, and then made the following Observations.							4 28	7 5	
		23 46	4 8				4 40	7 3	
		23 57	4 5				0 7	4 1	
		0 17	3 10				20 25	3 10	
♂ — 10.	0 46 23	2 9 ¹	2 10	High Water.		19 20 55	21 9 ¹	3 7	High Water.
		4 0	3 10				21 51	3 10	
							22 15	4 1	

Observations at Dusky Bay, Continued.

Observations on the Tides.

1773.	Apparent Time.	Time by the Clock.	Water below a certain Mark.	Remarks.	1773.	Apparent Time.	Time by the Clock.	Water below a certain Mark.	Remarks.
	H	H	F. I.			H	H	F. I.	
♀ April 16.		23 45	5 4		♂ April 20.		6 42	8 4	
		0 5	5 7				7 20	7 11	
		0 27	6 0				10 59	3 7	
		0 54	6 6				11 16	3 4	
♂ — 17.	1 47 33	3 37 ¹ / ₂	8 5	Low Water.		9 56 10	11 58 ¹ / ₂	3 2	High Water.
		6 20	6 6				12 33	3 4	
		6 42	6 0				13 5	3 7	
		7 13	5 7				22 19	4 4	
		7 31	5 4				22 46	4 0	
		7 50	4 9				22 57	3 10	
	8 4 48	9 55 ¹ / ₂	3 7	High Water.		22 20 48	0 24 ¹ / ₂	3 11	High Water.
		11 56	4 9		♀ — 21.		1 55	3 10	
		12 20	5 4				2 5	4 0	
		12 39	5 7				2 27	4 4	
		13 12	6 0				4 40	7 4	
		20 16	4 9				4 52	7 6	
		20 32	4 5			4 30 14	6 35 ¹ / ₂	8 5	Low Water.
		20 47	4 2				8 19	7 6	
	20 14 40	22 7 ¹ / ₂	3 7	High Water.			8 30	7 4	
		23 25	4 2				11 14	3 7	
		23 40	4 5				11 26	3 5	
		0 3	4 9				11 43	3 3	
♂ — 18.			8 4 ¹ / ₂	Low Water.		10 29 2	12 35	2 10	High Water.
			3 6	High Water, Evening.			13 28	3 3	
		20 50	4 9				13 42	3 5	
		21 13	4 4				13 57	3 7	
		21 37	4 0					8 6	Low Water.
	21 1 56	22 56 ¹ / ₂	3 5	High Water.			23 54	3 6	
		0 14	4 0				0 27	3 2	
		0 40	4 4			22 57 2	1 5	2 10	High Water.
		1 4	4 9				1 45	3 2	
Made a new rod to my instrument, the former having, by accident, got broke, and the distance from the bottom of the float to the first division being shorter by 1 ¹ / ₂ inches than in the former; this will give all distances of the water from the mark greater by that quantity.					♂ — 22.		2 14	3 6	
			8 7	Low Water.			12 10	3 7	
			3 9				12 28	3 4	
			3 5 ¹ / ₂				12 42	3 2	
			3 9			11 9 20	13 19 ¹ / ₂	2 10	High Water.
			3 11				13 56	3 2	
			4 3				14 10	3 4	
			3 11				14 30	3 7	
			3 11			17 26 36	19 37 ¹ / ₂	8 7 ¹ / ₂	Low Water, Morning.
			3 9				23 59	4 2	
			3 4	High Water.			0 45	3 7	
			3 9			23 30 8	1 42	3 0	High Water.
			3 11		♀ — 23.		2 38	3 7	
			4 3				3 26	4 2	
			7 11				8 8	8 8	Low Water, Evening
			8 4				3 1	3 1	High Water.
			8 0				8 7	8 7	Low Water, Morning.
♂ — 20.		4 25	7 11				12 1	3 7	
		4 55	8 4				12 26	3 4	
	3 49 24	5 50 ¹ / ₂	8 0	Low Water.	♂ — 24	0 3 13	12 48	3 2	High Water.

Observations at Dusky Bay, Continued.

Observations on the Tides.

1773.	Apparent Time.	Time by the Clock.	Water below a certain Mark.		Remarks.	1773.	Apparent Time.	Time by the Clock.	Water below a certain Mark.		Remarks.
	H	H	F.	I.			H	H	F.	I.	
April 24.		13 10	3	4	Low Water.	April 25.		11 45	4	6	High Water.
		13 35	3	7				12 15	4	0	
		5 12	7	8		D — 26.	0 41 39	13 26 $\frac{1}{4}$	3	6 $\frac{1}{2}$	
		5 47	8	3				14 35	4	0	
18 1 2		6 45 $\frac{3}{4}$	8	6				15 10	4	6	
		7 44	8	3	Low Water.				8	4	Low Water, Evening.
☉ — 25.		8 20	7	8					8	4	Low Water, Morning
			8	5							

I made the preceding Observations by the help of a wooden tube, about 12 feet long and three inches square, which was placed upright in the water, and fixed firm to a large tree that hung over it. The tube had a small aperture at the bottom, whereby the water was admitted, so that the swell of the sea had little effect on the water in the tube; and the distance of the water from a mark on the top of the tube, was measured by a slender rod, divided into feet and inches, from the bottom upwards.

Observations at Dusky Bay, Continued.

The Latitude of Dusky Bay, deduced from Observations of the Sun and fixed Stars, when on the Meridian.

				Interior Arch.	Exterior Arch.
The error of the line of collimation, of the Quadrant, by a mean of the four Observations of γ Navis.				10,2 Add.	28,2 Subt.
By a mean of the four Observations of δ Navis.				13,2 Add.	32,2 Subt.
The mean of two gives				11,7 Add.	30,2 Subt.

1773.	Latitude by interior Arch.	Latitude by exterior Arch.	Declination.	1773.	Latitude by interior Arch.	Latitude by exterior Arch.	Declination.
By Observations of the Sun.				By Observations of γ Navis.			
☉ April 5.	45 47 2	45 46 37	6 7 32	☉ April 11.	45 48 0	45 47 52	46 40 31 $\frac{1}{2}$ South.
☉ — 11.	45 48 12 $\frac{1}{2}$	45 47 38	8 21 47 $\frac{1}{2}$	☉ — 16.	45 47 26 $\frac{1}{2}$	45 47 36	
☉ — 15.	45 47 56	45 47 34	9 48 37 $\frac{1}{2}$	☉ — 18.	45 47 18	45 47 38	
☉ — 16.	45 47 56 $\frac{3}{4}$	45 47 33 $\frac{3}{4}$	10 9 57	☉ — 22.	45 47 45 $\frac{1}{2}$	45 48 2	
☉ — 18.	45 47 44	45 47 36 $\frac{1}{4}$	10 52 5 $\frac{1}{2}$		45 47 37 $\frac{1}{2}$	45 47 47	Mean of all by γ Navis.
☉ — 22.	45 48 15 $\frac{1}{4}$	45 47 55	12 14 13 $\frac{1}{2}$				
	45 47 51	45 47 29	Mean of all by the Sun.	By Observations of δ Navis.			
By Observations of Procyon.				☉ — 16.	45 47 35 $\frac{1}{2}$	45 47 38 $\frac{1}{2}$	53 52 58 $\frac{1}{2}$ South.
☉ — 6.	45 47 25 $\frac{1}{2}$	45 46 52	5 47 30 $\frac{3}{4}$ N.	☉ — 18.	45 47 24 $\frac{3}{4}$	45 47 32 $\frac{1}{2}$	
☉ — 11.	45 47 2	45 46 49 $\frac{1}{2}$		☉ — 21.	45 47 35	45 47 44	
☉ — 16.	45 47 6	45 46 46 $\frac{3}{4}$		☉ — 22.	45 47 30 $\frac{1}{2}$	45 47 35 $\frac{3}{4}$	
☉ — 18.	45 47 20 $\frac{1}{4}$	45 47 5 $\frac{1}{4}$			45 47 31 $\frac{1}{2}$	45 47 37 $\frac{3}{4}$	Mean of all by δ Navis.
	45 47 13 $\frac{1}{2}$	45 46 53 $\frac{1}{2}$	Mean of all by Procyon.		45 47 37 $\frac{1}{2}$	45 47 47	Ditto, γ .
By Observations of β Navis.					45 47 9	45 47 26 $\frac{2}{3}$	Ditto, β .
☉ — 11.	45 46 47	45 47 3 $\frac{1}{2}$	68 47 11 S.		45 47 26	45 47 37	Mean of all the Southern Observ.
☉ — 16.	45 47 9 $\frac{1}{2}$				45 47 51	45 47 29	Mean of all by the Sun.
☉ — 18.	45 47 10	45 47 33			45 47 13	45 46 53 $\frac{1}{2}$	Mean of all by Procyon.
☉ — 21.	45 47 30	45 47 43 $\frac{1}{2}$			45 47 32 $\frac{1}{4}$	45 47 11 $\frac{1}{4}$	Mean of all by Northern Observ.
	45 47 9	45 47 26 $\frac{2}{3}$	Mean of all by β Navis.		45 47 26	45 47 37	Ditto, Southern Observations.
					45 47 29 $\frac{1}{8}$	45 47 24 $\frac{1}{8}$	Ditto of the two.

And by taking the Mean of the two Arches, the Latitude is $45^{\circ} 47' 26\frac{1}{2}''$ South.

* * Three double altitudes of the Sun's Limb, taken with Hadley's Quadrant from a quick-silver horizon, gave the Latitude of the Observatory $45^{\circ} 48' 44''$, $45^{\circ} 47' 30''$, and $45^{\circ} 47' 23''$; the mean of which is $45^{\circ} 47' \frac{7}{8}''$ South.

Observations at Dufky Bay, Continued.

Computations of the Clock's Rate of going.

1773.	Time of Noon by the Clock.	Syderial Time of apparent Noon.	Mean Time of apparent Noon.	Clock fast of Syderial Time.	Clock fast of mean Time.	Clock gains on Syderial Time.	Clock gains on mean Time.
	H "	H "	H "	" "	H "	" "	" "
April 5.	1 4 36,4	0 57 15,0	0 2 45,3	7 21,4	1 1 51,1	0 4,9	4 1,4
δ — 6.	1 8 20,0	1 0 53,7	0 2 27,5	7 26,3	1 5 52,5	0 2,8	3 59,3
☉ — 11.	1 26 50,9	1 19 10,7	0 1 2,0	7 40,2	1 25 48,9	0 3,4	3 59,9
h — 17.	1 49 17,9	1 41 17,2	23 59 29,5	8 0,7	1 49 48,4	0 4,3	4 0,9
☉ — 18.	1 53 4,7	1 44 59,7	23 59 15,4	8 5,0	1 53 49,3	Clock stopped.	
☉ — 19.	1 56 41,9	1 48 42,6	23 59 1,7	7 59,3	1 57 40,2	0 4,5	4 0,9
δ — 20.	2 0 29,6	1 52 25,8	23 58 48,5	8 3,8	2 1 41,1	0 4,5	4 1,0
δ — 21.	2 4 17,8	1 56 9,5	23 58 35,7	8 8,3	2 5 42,1		
Mean gain of the Clock						0 4,066	4 0,566

Computations of the Rate that Mr. Kendall's Watch went at.

1773.	Time of apparent Noon by the Clock.	Time by Clock when the Watch was com- pared.	Time from Noon by the Clock.	Clock's gain on the Watch.	Time from Noon by the Watch.	Time by the Watch when com- pared.	Time of ap- parent Noon by the Watch.	Mean Time of apparent Noon.	Watch flow of mean Time.	Watch gains on mean Time.
	H "	H "	" "	" "	" "	H "	H "	H "	H "	" "
δ April 6.	1 8 20,0	1 30 0	21 40,0	3,6	21 36,4	13 8 47,4	12 47 10,85	0 2 27,5	11 15 16,65	5,77
☉ — 11.	1 26 50,9	1 43 0	16 9,1	2,7	16 6,4	13 2 20,1	12 46 14,1	0 1 1,9	11 14 47,8	8,36
h — 17.	1 49 17,5	1 59 0	9 42,5	1,6	9 40,9	12 55 12,4	12 45 31,85	23 59 29,5	11 13 57,65	5,25
☉ — 18.	1 53 4,7	2 28 0	34 55,3	5,8	34 49,5	13 20 12,1	12 45 23,0	23 59 15,4	11 13 52,4	4,80
☉ — 19.	1 56 41,5	2 1 0	4 18,1	0,7	4 17,4	12 49 31,1	12 45 14,1	23 59 1,7	11 13 47,6	8,10
δ — 20.	2 0 29,6	2 33 0	32 30,4	5,4	32 25,0	13 17 34	12 45 9,0	23 58 48,5	11 13 39,5	6,70
δ — 21.	2 4 17,8	2 20 0	15 42,2	2,6	15 39,6	13 0 42,1	12 45 2,9	23 58 35,7	11 13 32,8	6,38
By the Watch itself, the Clock being taken down										
☉ — 25.	12 44 41,7	12 43 57,5	0 43,2	0,01	0 43,2	12 43 57,1	12 44 41,7	23 57 49,0	11 13 7,3	
The mean of all is										4,86

But if the first and last be taken only, the rate of the Watch will be gaining 6'808 on mean time each day. If a mean be taken of all the Comparisons which can be formed out of the above, its gain on mean time will be 6'',726.

Observations at Dusky Bay, Continued.

Computations of the Rate at which Mr. Arnold's Watch (No. 3.) went.

1773.	Time of apparent Noon by the Clock.	Time by Clock when the Watch was com- pared.	Time from Noon by the Clock.	Clock's gain on the Watch.	Time from Noon by the Watch.	Time by the Watch when com- pared.	Time of apparent Noon by the Watch.	Mean Time of apparent Noon.	Watch flow of mean Time.	Watch gains on mean Time.
	H " "	H " "	" " "	" "	" " "	H " "	H " "	H " "	H " "	" "
♂ April 6.	1 8 20,0	1 30 0	21 40,0	5,13	21 34,87	9 35 57,75	9 14 22,88	0 2 27,5	14 48 4,62	
☉ — 11.	1 26 50,9	1 43 0	16 9,1	3,78	16 5,32	9 21 18,50	9 5 13,18	0 1 1,9	14 55 48,72	93,22
♂ — 17	1 49 17,5	1 59 0	9 42,5	2,26	9 40,24	9 2 17,0	8 52 36,76	23 59 29,5	15 6 52,74	110,67
☉ — 18	1 53 4,7	2 28 0	34 55,3	8, c	34 47,30	9 25 33,75	8 50 46,45	23 59 15,4	15 8 28,95	96,21
♂ — 19	1 56 41,5	2 1 0	4 18,1	1,03	4 17, 7	8 53 9,0	8 48 51,93	23 59 1,7	15 10 9,77	100,82
♂ — 20	2 0 29,6	2 33 0	32 30,4	7,47	32 22,93	9 19 18,50	8 46 55,57	23 58 48,5	15 11 52,93	103,16
♂ — 21.	2 4 17,8	2 20 0	15 42,2	3,61	15 38,59	9 0 49,75	8 45 11,16	23 58 35,7	15 13 24,54	91,61
By Mr. Kendall's Watch, the Clock being taken down.										
☉ — 25.	12 44 41,7	12 43 57,5	0 43,2	0, 51	0 43,15	8 37 0, 01	8 37 43,15	23 57 49,0	15 20 6,85	100,58
The mean of all is										99,467

But if the first and last day's Observations be taken only, the gain of this Watch, each day, on mean time, will come out $101'',17$. If a mean be taken of all the comparisons which can be formed out of the above Observations, its gain each day, on mean time, will be $101'',051$.

ASTRONOMICAL OBSERVATIONS.

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Observations at Queen Charlotte's Sound, in New Zealand, made by Mr. Bayley.

1773.	Equal Altitudes. Times by Clock marked C.			Zenith Distance.	Transit over the Meridian.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	" "	" "			
April 19.	51 34	21 54 25	57 19½	} 75 25 0		☉'s U. L.
	54 49½	21 57 44½	0 35:			☉'s L. L.
	16 50½	22 19 53½	22 57½	} 71 23 0		☉'s U. L.
	20 18	22 23 22½				☉'s L. L.
	33 1	22 36 11	39 22	} 68 55 0		☉'s U. L.
	36 37½	22 39 49½				☉'s L. L.
δ — 20.					1 51 56,5	
	6 47	5		} 68 55 0		☉'s L. L.
	10 23	5 7 14½	4 4½			☉'s U. L.
	23 5:	5 20 3	17 58	} 71 23 0		☉'s L. L.
		5 23 30½	20 28½			☉'s U. L.
		5	42 45	} 75 25 0		☉'s L. L.
	51 49½	5				☉'s U. L.
	2 5½	22 5 0½	7 55	} 74 20 0		☉'s U. L.
	5 25½	22 8 23	11 21			☉'s L. L.
ε — 21.					1 54 13,01	
	42 30	5 39 32	36 34½:	} 74 20 0		☉'s L. L.
	45 51	5 42 55½	39 58½			☉'s U. L.
♀ — 23.		23 15 14	18 48	} 65 48 0		☉'s U. L.
	15 44½	23 19 19½				☉'s L. L.
	21 33:	23 25 14	28 59½	} 64 30 0		☉'s U. L.
	25 46½	23 29 31½	33 19½			☉'s L. L.
η — 24.					2 0 59,9	
	35 45:	4 32 1¼	28 14¼	} 64 30 0		☉'s L. L.
		4 36 17	32 34			☉'s U. L.
	45 46	4 42 10		} 65 48 0		☉'s L. L.
		4 46 17½	42 43½			☉'s U. L.
	26 40	22 29 44¼	32 49	} 72 54 0		☉'s U. L.
	30 10½	22 33 15½				☉'s L. L.
		23 1 59	5 31:	} 68 11 0		☉'s U. L.
	2 27½	23 5 51				☉'s L. L.
ο — 25.					2 3 16,9	
	3 39	5 0 16		} 68 11 0		☉'s L. L.
		5 4 7				☉'s U. L.
		5 32 49		} 72 54 0		☉'s L. L.
			33 14½			☉'s U. L.
	26 41	22 29 43½	32 47½	} 73 30 0		☉'s U. L.
	30 8½	22 33 13½	36 19½			☉'s L. L.
		22 42 26		} 71 35 0		☉'s U. L.
		22 46 3½	49 14½			☉'s L. L.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

1773.	Equal Altitudes. Times by Clock C.			Zenith Distance.	Transit over the Meridian.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	"	H	"		H	
○ April 25.	52 23	22 55 38 $\frac{1}{2}$	58 56	69 40 0		○'s U. L. } Easterly. ○'s L. L. }
○ — 26.	56 5	22 59 24 $\frac{1}{4}$	2 44		2 5 34,44	○'s L. L. } ○'s U. L. } ○'s L. L. } Easterly. ○'s U. L. } ○'s L. L. } ○'s U. L. }
	14 36 $\frac{1}{2}$	5 11 17 $\frac{1}{2}$	7 55 $\frac{1}{2}$	69 40 0		
	18 19	5 15 3	11 45 $\frac{1}{2}$			
		5 24 37	21 26 $\frac{1}{2}$	71 35 0		
		5 28 15				
	40 30	5 37 25 $\frac{1}{2}$		73 30 0		
	43 59 $\frac{1}{2}$	5 40 55 $\frac{1}{2}$	37 50			
	Put the Clock 12 minutes forward.					
	54 48	8 58 31 $\frac{1}{4}$	2 16	68 2 0	11 39 39,6	β Leonis, East.
	24 30	14 20 48	17 4			Ditto, West.
	21 48 $\frac{1}{2}$	9 24 23 $\frac{1}{4}$	26 57 $\frac{1}{2}$		13 15 21,64	Spica Virginis, East.
	8 54 $\frac{3}{8}$	17 6 20 $\frac{1}{2}$	3 45 $\frac{1}{2}$			Ditto, West.
	42 53	22 45 58	49 3 $\frac{1}{4}$	73 27 0		○'s U. L. } ○'s L. L. } Easterly. ○'s U. L. }
	46 24 $\frac{1}{2}$	22 49 29 $\frac{3}{4}$	52 35 $\frac{1}{2}$			
	3 50	23 7 6	10 22	70 20 0		
	7 32 $\frac{1}{2}$	23 10 50 $\frac{3}{8}$	14 9 $\frac{1}{2}$		2 19 51,8	○'s L. L. } ○'s U. L. } Easterly. ○'s L. L. }
δ — 27.	31 43 $\frac{1}{2}$	5 28 26	25 7	70 20 0		○'s L. L. } ○'s U. L. } Easterly. ○'s L. L. }
	35 26	5 32 10	28 53			
	52 51 $\frac{1}{2}$	5 49 45 $\frac{1}{2}$	46 3 $\frac{3}{8}$	73 27 0		
	56 21	5 53 17	50 11			
ε — 28.		22 45 48 $\frac{1}{2}$	48 55 $\frac{1}{4}$	74 40 0		○'s U. L. } ○'s L. L. } Easterly. ○'s U. L. }
	46 13 $\frac{1}{2}$	22 49 20 $\frac{1}{2}$	52 26			
	58 12	23 1 24		72 20 0		
	1 49 $\frac{1}{2}$	23 5 2 $\frac{1}{2}$			2 24 29,03	○'s L. L. } ○'s U. L. } Easterly. ○'s L. L. }
η — 29.	46 40	5 43 29		72 20 0		○'s L. L. } ○'s U. L. } Easterly. ○'s L. L. }
	50 17	5 47 6				
	2 14 $\frac{1}{2}$	5 59 8 $\frac{1}{2}$		74 40 0		○'s L. L. } ○'s U. L. } Easterly. ○'s L. L. }
	5 43	6 2 4	59 34 $\frac{1}{2}$			
θ — 30.	48 16 $\frac{1}{2}$	22 51 22		75 0 0		○'s U. L. } ○'s L. L. } Easterly. ○'s U. L. }
	51 46 $\frac{1}{2}$	22 54 53	58 1 $\frac{1}{2}$			
	1 35	23 4 48	7 59 $\frac{1}{2}$	73 0 0		
	5 12	23 8 26 $\frac{1}{2}$	11 41		2 29 6,95	○'s L. L. } ○'s U. L. } Easterly. ○'s L. L. }
ι May 1.	52 35	5 49 21 $\frac{1}{2}$	46 7	73 0 0		○'s L. L. } ○'s U. L. } Easterly. ○'s L. L. }
	56 11	5 53 2	49 48 $\frac{1}{2}$			
	6 0	6 2 53	59 46	75 0 0		○'s L. L. } ○'s U. L. } Easterly. ○'s L. L. }
	9 29	6 6 25 $\frac{1}{2}$	3 19			

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

1773.	Equal Altitudes. Times by Clock C.			Zenith Distance.	Transit over the Meridian.	Phenomena and Remarks.		
	Lower Wire.	Middle Wire.	Upper Wire.					
	' " "	H " "	' " "	H " "	H " "			
h May 1.	55 3 58 37 11 21 15 3½	22 58 11 23 1 46½ 23 14 36 23 18 21½	1 20 4 57½ 17 52 21 40¼	} 74 33 0 } 72 9 0		☉'s U. L. ☉'s L. L. } Easterly. ☉'s U. L. ☉'s L. L.		
☉ — 2.								2 31 27,43
	51 6 3 50 7 22¾	5 44 5 5 47 51 6 0 40 6 4 16	40 47½ 44 33¾ 57 28 1 6	} 72 9 0 } 74 33 0			☉'s L. L. ☉'s U. L. } Westerly. ☉'s L. L. ☉'s U. L.	
D — 3.	52 2½ 40 6½	8 55 57 19 36 12	59 50 32 18¼					} 50 40 0
☿ — 5.	9 47½ 28 21 32 11½	23 13 0 23 16 39½ 23 31 44¼ 23 35 36½	16 14 19 55 35 8 39 4	} 74 40 0 } 72 0 0		☉'s U. L. ☉'s L. L. } Easterly. ☉'s U. L. ☉'s L. L.		
♃ — 6.								
	49 8½ 52 58½	5 45 43¾ 5 49 36	42 16½ 46 11½	} 72 0 0 } 74 40 0			☉'s L. L. ☉'s U. L. } Westerly. ☉'s L. L. ☉'s U. L.	
	11 31 18 15 21 58½	6 8 19 23 21 31 23 25 16½	5 5½ 24 48 28 34					} 74 0 0
♀ — 7.		6 0 50½ 6	57 29½ 1 17½	} 74 0 0		☉'s L. L. } Westerly. ☉'s U. L.		
h — 8.	Put the Clock 20 minutes forward.							
D — 17.	4 52 9 42¼	1 9 7½ 1 14 4½	13 29 18 36	} 68 32 0			☉'s U. L. } Easterly. ☉'s L. L.	
♂ — 18.								
	49 31½ 54 27½	5 45 10¼ 5 50 7¼	40 41½ 45 48	} 68 32 0		☉'s L. L. } Westerly. ☉'s U. L.		
☿ — 19.	50 33 11 33½	9 53 14 16 8 52	56 57 6 9					}
	44 52	1		}				
♃ — 20.	24 28	5 5 25 9					}	

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

1773.	Transits of the Sun, Moon, and Stars, over the Meridian. Time by the Clock C.					Phenomena and Remarks.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	"	"	H "	" "	" "	
♂ April 20.	Having fixed up the Transit Instrument, I levelled the axis, adjusted the line of collimation, and directed it, by means of the horizontal adjusting screw, to a very good mark on an island to the Northward.					
♀ — 21.	51 53	52 35— 54 46 $\frac{5}{8}$	1 53 18 $\frac{1}{2}$ 1 55 29 $\frac{1}{2}$	54 1 $\frac{1}{2}$ 56 12—	— 56 54 $\frac{1}{2}$	☉'s First L. ☉'s Second L.
	These Observations being compared with the time of noon deduced from equal altitudes, shew that the Instrument was 10",67 in time West of the true meridian.					
♀ — 23.	Moved the Instrument very near the true meridian, where it accidentally cut two very good marks, one about a mile and quarter to the Northward, and the other about 4 $\frac{1}{2}$ miles to the Southward. By these two marks the Instrument was generally examined before every Observation in the day-time.					
♂ — 24.	58 28 $\frac{1}{2}$	59 10 $\frac{1}{2}$ 1 21 $\frac{5}{8}$	1 59 54 $\frac{1}{2}$ 2 2 5 $\frac{1}{2}$	0 37 2 48 $\frac{3}{8}$	— 3 30 $\frac{1}{2}$	☉'s 1st L. } By these the Instrument is 0",6. ☉'s 2d L. } East of the true meridian.
☉ — 25.	0 44 $\frac{1}{2}$	1 26 $\frac{5}{8}$	2 2 10— 2 4 22—	2 55 5 4 $\frac{5}{8}$	— 5 47 $\frac{1}{4}$	☉'s 1st L. } These make the Instrument 1",15. ☉'s 2d L. } East of the true meridian.
♂ — 26.	3 51 $\frac{1}{2}$	3 43 $\frac{5}{8}$ 5 56— 15 21 $\frac{1}{2}$ 32 42 $\frac{1}{2}$	2 4 27 $\frac{5}{8}$ 2 6 39 5 16 7+ 5 33 24 $\frac{5}{8}$ 7 21 49—	5 10 $\frac{1}{2}$ 7 22— 6 52 $\frac{5}{8}$ 34 7	— 8 4 $\frac{5}{8}$	☉'s 1st L. } Instrument 1",32 East of the me ☉'s 2d L. } ridian. ♂'s 1st Limb. α Orionis. Pollux.
	Put the Clock 12 Minutes forward.					
	38 12 $\frac{5}{8}$	57 49 $\frac{1}{2}$ 38 5 $\frac{1}{2}$ 14 51 $\frac{5}{8}$	9 58 32— 11 12 16 22—	59 16— 40 22 $\frac{5}{8}$ 17 50 $\frac{5}{8}$	41 5 $\frac{1}{2}$ — 16 45 $\frac{5}{8}$	Regulus. β Leonis. Instrument 0",54 East. α Crucis.
	13 57 $\frac{5}{8}$	14 3— 29 52+ 5 52+	13 15 22 $\frac{1}{8}$ 13 31 12 $\frac{1}{2}$ 14 7 21 $\frac{1}{2}$ 14 26 27 $\frac{1}{2}$	16 5 $\frac{1}{2}$ 32 33 $\frac{1}{2}$ 8 6+ —	— 8 50 $\frac{1}{8}$ — —	Spica Virginis. Instrument 0",44 East of Merid. α Eridani: below the Pole. Arcturus. α Centauri.
		29 11+ 18 1 $\frac{1}{2}$ 20 13 $\frac{1}{2}$	1 30 31 2 18 45 $\frac{5}{8}$ 2 20 57 $\frac{1}{2}$ 4 24 2 $\frac{5}{8}$	31 51 $\frac{5}{8}$ 19 28 $\frac{1}{2}$ 21 40 $\frac{1}{2}$ —	— — 22 23 —	α Eridani: above the Pole. ☉'s 1st Limb. ☉'s 2d Limb. Aldebaran.
♂ — 27.	17 20—	4 1+ 42 32 $\frac{1}{2}$ 17 47—	5 4 44— 5 43 56 $\frac{1}{2}$ 6 19 16+ 6 36 9 7 20 57 $\frac{1}{2}$ 7 28 22	5 26 44 38 $\frac{1}{8}$ 20 2 — 29 4	6 7 $\frac{1}{2}$ 45 20 $\frac{1}{2}$ 20 46 $\frac{1}{2}$ — —	Rigel. α Orionis. ♂'s 1st Limb: very good. Syrius. Castor. Procyon.

ASTRONOMICAL OBSERVATIONS.

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Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

1773.	Transits of the Sun, Moon, and Stars, over the Meridian. Times by the Clock C.					Phenomena and Remarks.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	" "	" "	H " "	" "	" "	
♂ April 27.	—	31 32½	7 32 20½	33 8½	—	Pollux.
	—	—	9 11 33½	—	—	β Navis: above the Pole.
	—	—	9 17 17+	—	—	α Hydræ.
	55 39½	56 21+	9 56 59½	57 48—	58 30—	Regulus.
	36 44+	37 27—	11 38 11—	38 54½	39 37½	β Leonis.
	—	27 41½	1 29 2½	30 22½	—	α Eridani: above the Pole.
♀ — 28.	19 37	20 19+	2 21 3—	21 46+	—	☉'s 1st L.
	—	22 31—	2 23 5	23 58½	24 41½	☉'s 2d L.
	9 30½	10 14¾	7 11 0	11 45½	12 30	☿'s 1st L.
♂ — 29.	21 55¾	22 37¾	2 23 21½	—	—	☉'s 1st L.
	—	—	2 25 33½	26 17½	26 59½	☉'s 2d L.
	—	15 47¾	6 16 57¾	18 6¾	—	Canopus: above the Pole.
	31 44¾	32 31½	6 33 11½	33 54½	34 38—	Syrius.
	—	17 14¾	7 18 4¾	18 54½	—	Castor.
	—	24 41½	7 25 24	26 6½	—	Procyon.
	—	—	7 29 23	—	—	Pollux.
	1 38—	2 21+	8 3 1	3 51—	4 35½	☿'s 1st L.
	—	6 35	9 8 30+	10 25—	—	β Navis: above the Pole.
	—	—	9 14 19+	—	—	α Hydræ.
	—	—	9 54 6½	—	—	Regulus.
	33 46½	34 29½	11 35 13+	35 56½	36 39½	β Leonis.
	—	10 25½	12 11 55+	13 14¾	—	α Crucis.
	—	15 13—	12 16 28+	17 42½	—	γ —.
	—	31 16—	12 32 22+	33 42	—	β —.
	—	25 26½	13 26 46½	28 7½	—	α Eridani: below the Pole.
	—	20 36—	14 22 0	23 24+	—	α Centauri.
	—	15 3—	18 16 11½	17 21½	—	Canopus: below the Pole.
♀ — 30.	—	—	21 6 16½	—	—	β Navis: below the Pole.
	—	—	1 24 35½	—	—	α Eridani: above the Pole.
♂ May 1.	26 34	27 16+	2 28 0	—	—	☉'s 1st L.
	—	—	2 30 12½	30 56½	31 38¾	☉'s 2d L.
	—	—	6 30 14—	—	—	Syrius.
	—	25 38—	7 26 26+	27 14—	—	Pollux.
	—	3 37½	9 5 34¾	7 32	—	β Navis: above the Pole.
	—	47 34¾	9 48 17¾	49 2—	—	☿'s 1st Limb: good.
	—	50 25½	9 51 9+	51 52½	—	Regulus.
	30 49	31 31½	11	32 59½	33 42	β Leonis.
	—	—	1 23 6½	—	—	α Eridani: above the Pole.
☉ — 2.	28 53½	29 35½	2 30 20	—	—	☉'s 1st L.
	—	—	2 32 32½	33 15¾	33 58½	☉'s 2d L.
	—	35 49½	5 36 32½	37 15—	—	α Orionis.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

1773.	Transits of the Sun, Moon, and Stars, over the Meridian. Time by the Clock C.					Phenomena and Remarks.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	"	"	H "	"	"	
☉ May 2.		2 10+	9 4 7+	6 3		β Navis: above the Pole.
		9 10	9 9 53	10 35½		α Hydræ.
	48 15½		9	50 23½	51 6	Regulus.
		41 7½	10 41 51	42 33½		δ's 1st Limb: very good.
☽ — 3.	31 14	31 57	2 32 41			☉'s 1st L.
			2 34 53½	35 37+	36 20	☉'s 2d L.
		18 46½	7 19 29½	20 11+		Procyon.
			7 23 28+			Pollux.
			9 2 37			β Navis: above the Pole.
	7 0+	7 41½	9 8 24+	9 6½	9 48½	α Hydræ.
	46 46	47 28+	9 48 11½	48 55	49 37+	Regulus.
			11 29 18½			β Leonis.
		35 53½	11 36 37+	37 20		δ's 1st Limb: good.
	18 14	19 33½	13 20 54+	22 14½	23 22+	α Eridani: below the Pole.
	55 32	56 15½	14 57 0+	57 45½	58 29	Arcturus.
		14 40	14 16 4+	17 28+		α Centauri. Instrument 0", 25 East.
		9 8	18 10 18	11 28		Canopus: below the Pole.
		59 58	21 1 53	3 51		β Navis, Ditto.
			21 6 20			α Navis, Ditto.
☽ — 4.	33 34	34 17	2 35 1½			☉'s 1st L.
			2 37 14½	37 58	38 41	☉'s 2d L.
			7 18 0+			Procyon.
		21 11	7 21 59½	22 47		Pollux.
		27 46	8 28 58	30 9½		δ } Navis: above the Pole.
		59 11½	9 1 9	3 5		β }
	5 31+	6 13	9 6 56	7 38	8 20	α Hydræ.
		46 0	9 46 43	47 26½		Regulus.
☽ — 5.		36 39	2 37 23			☉'s 1st L.
			2 39 36	40 19½		☉'s 2d L.
	4 2½	4 44+	9 5 27+	6 9½	6 51½	α Hydræ.
	0 38½	1 20	13 2 3	2 46	3 27+	Spica Virginis.
			13 17 55			α Eridani: below the Pole.
	30 27	31 19+	13 31 53	32 37	33 19½	δ's 1st Limb: good.
		53 17½	13 54 2½	54 47½		Arcturus.
		11 43	14 13 7	14 31+		α Centauri: above the Pole.
	25 37½	26 19½	14 27 3½	27 47+	28 30	α Libræ.
		15 51	1 17 11½	18 31½		α Eridani: above the Pole.
			2 12 22			α Centauri: below the Pole.
☽ — 6.	38 18½	39 0½	2 39 45+			☉'s 1st L.
			2 41 58½	42 43+	43 25+	☉'s 2d L.
	29 14	29 55	5 30 38		32 1½	α Orionis.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

1773.	Transit of the Sun, Moon, and Stars, over the Meridian. Times by the Clock C.					Phenomena and Remarks.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	"	"	H " "	"	"	
24 May 6.			6 6 37			Canopus : above the Pole.
		14 20+	7 15 3	15 45		Procyon.
		18 14	7	19 49 $\frac{1}{2}$		Pollux.
			8 5 25 $\frac{1}{2}$			' } Navis : above the Pole.
		56 13 $\frac{1}{2}$	8 58 11+	0 7		β } Hydrae.
		3 15	9	4 40		α Leonis.
	18 25	19 8+	11 19 51 $\frac{1}{2}$	20 35	21 18	β Spica Virginis.
		59 51+	13 0 34	1 16 $\frac{1}{2}$		α Eridani : below the Pole.
		15 6	13 16 26	17 47		Arcturus.
	51 5	51 49	13 52 34	53 18+	54 2 $\frac{1}{2}$	δ 's 1st Limb : good.
	31 30 $\frac{1}{2}$	32 13 $\frac{1}{2}$	14 32 58 $\frac{1}{2}$	33 42 $\frac{1}{2}$	34 21	' } Navis : below the Pole.
		3 19 $\frac{1}{2}$	20 4 40	6 2		β } Eridani : above the Pole.
		55 29+	20 57 25+	59 22+		α O's 1st L.
		14 22	1 15 43	17 2		O's 2d L.
25 May 7.	40 40	41 23	2 42 7			α Eridani : below the Pole.
			2 44 20 $\frac{1}{2}$	45 4 $\frac{1}{2}$	45 48	Arcturus.
			13 14 57			α Cor. Bor.
	49 36		13 51 4 $\frac{1}{2}$	51 49 $\frac{1}{2}$	52 33	α Serpentis.
	9 12	9 58	15 10 45 $\frac{1}{2}$	11 33+	12 19 $\frac{1}{2}$	δ 's 2d L.
	17 23	18 4	15 18 46 $\frac{1}{2}$	19 29	20 10 $\frac{1}{2}$	α Eridani : above the Pole.
	36 54 $\frac{1}{2}$	37 38 $\frac{1}{2}$	15 38 23 $\frac{1}{2}$	39 8 $\frac{1}{2}$	39 52 $\frac{1}{2}$	O's 1st L.
		12 52 $\frac{1}{2}$	1 14 13	15 33+		O's 2d L.
26 May 8.		43 46	2 44 30			δ Navis : above the Pole.
			2 46 44	47 27 $\frac{1}{2}$		Spica Virginis.
			8 23 02			α Eridani : below the Pole.
			12 57 34 $\frac{1}{2}$			Arcturus.
		12 8	13 13 27 $\frac{1}{2}$	14 49		α Librae.
	48 6	48 50	13 49 34 $\frac{1}{2}$	50 19 $\frac{1}{2}$	51 4	α Cor. Bor.
	21 9 $\frac{1}{2}$	21 51 $\frac{1}{2}$	14 22 36	23 19 $\frac{1}{2}$	24 2	α Serpentis.
	7 42 $\frac{1}{2}$	8 29	15 9 16+	10 3 $\frac{1}{2}$	10 49 $\frac{1}{2}$	Antares.
	15 53		15 17 17	17 59	18 41+	δ 's 2d Limb : good.
	58 7 $\frac{1}{2}$	58 53	15 59 40+		1 12 $\frac{1}{2}$	α Ophiuchi.
		41 25 $\frac{1}{2}$	16 42 11 $\frac{1}{2}$	42 56 $\frac{1}{2}$		
			17 8 28			
Put the Clock 20 Minutes forward.						
27 May 9.	5 26	6 9	3 6 54			O's 1st L.
			3 9 7	9 50 $\frac{1}{2}$	10 34	O's 2d L.
	18 6		9 19 30	20 12	20 54	α Hydrae.
		58 33 $\frac{1}{2}$	9 59 17	0 0 $\frac{1}{2}$		Regulus.
	14 41 $\frac{1}{2}$	15 23 $\frac{1}{2}$	13 16 6 $\frac{1}{2}$		17 31	Spica Virginis.
			13 31 58			α Eridani : below the Pole.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.						
1773.	Transits of the Sun, Moon, and Stars, over the Meridian.					Phenomena and Remarks.
	Time by the Clock C.					
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
			H			
☉ May 9.		7 21	14 8 6 $\frac{1}{8}$	8 51—		Arcturus.
	26 13 $\frac{1}{2}$	26 59 $\frac{5}{8}$	15 27 47 $\frac{3}{8}$	28 35—	29 21 $\frac{5}{8}$	α Cor. Bor.
	34 24+		15 35 48+	36 30 $\frac{1}{2}$	37 12 $\frac{3}{8}$	α Serpentis.
			16 18 12			Antares.
	25 33 $\frac{3}{8}$	26 16—	17 26 59 $\frac{5}{8}$	27 43—	28 25+	α Ophiuchi.
	3 45 $\frac{1}{2}$	4 29 $\frac{5}{8}$	18 5 15+	6 0 $\frac{5}{8}$	6 45+	☉'s 2d Limb: good.
☽ — 10.	7 50	8 23	1 31 14+			α Eridani: above the Pole.
			11 31 $\frac{1}{2}$	12 16—	12 59 $\frac{1}{2}$	☉'s 1st Limb.
			7 29 7—			☉'s 2d Limb.
		32 17 $\frac{1}{2}$	7 33 6—	33 53+		Procyon.
		39 53—	8 40 4 $\frac{1}{2}$	41 16—		Pollux.
			9 12 9 $\frac{3}{4}$			δ Navis: above the Pole.
		17 19 $\frac{1}{4}$	9 18 2 $\frac{1}{4}$	18 44 $\frac{1}{2}$		β Navis: above the Pole.
	4 36	5 19 $\frac{1}{2}$	19 6 5 $\frac{3}{8}$	65 0 $\frac{1}{4}$	7 34 $\frac{3}{4}$	α Hydræ.
		28 27	1 29 47 $\frac{1}{4}$	31 7		☉'s 2d Limb: good.
♂ — 11.			5 43 12 $\frac{3}{4}$			α Eridani.
		24 40 $\frac{1}{2}$	6 25 34 $\frac{3}{4}$	26 8 $\frac{3}{4}$		α Orionis.
	26 14	26 55 $\frac{1}{2}$	7 27 37 $\frac{3}{4}$	28 20	29 1 $\frac{3}{8}$	Syrius.
		30 48 $\frac{1}{2}$	7 31 36 $\frac{3}{4}$	32 24 $\frac{3}{4}$		Procyon.
	54 54 $\frac{3}{4}$	55 36 $\frac{3}{4}$	9	57 3 $\frac{1}{2}$	57 45 $\frac{3}{4}$	Pollux.
	13 41 $\frac{3}{4}$	14 27 $\frac{3}{8}$	16 15 14 $\frac{1}{4}$	16 1 $\frac{3}{8}$	16 46 $\frac{5}{8}$	Regulus.
	22 36 $\frac{3}{4}$	23 18 $\frac{1}{2}$	17 24 2 $\frac{1}{8}$	24 44 $\frac{3}{4}$	25 27 $\frac{1}{2}$	Antares.
		17 16 $\frac{1}{4}$	18 18 25 $\frac{5}{8}$	19 35 $\frac{1}{2}$		α Ophiuchi.
	37 47	38 28 $\frac{1}{4}$	19 39 11 $\frac{3}{8}$	39 53 $\frac{1}{2}$	40 35 $\frac{5}{8}$	Canopus: below the Pole.
	42 14 $\frac{5}{8}$	42 55 $\frac{3}{4}$	19 43 38 $\frac{3}{8}$	44 20 $\frac{5}{8}$	45 1 $\frac{3}{4}$	α } Aquilæ.
	2 13 $\frac{1}{2}$	2 56 $\frac{3}{4}$	20 3 42 $\frac{1}{4}$	4 26 $\frac{5}{8}$	5 10 $\frac{1}{2}$	β }
		6 56 $\frac{3}{4}$	20 7 41 $\frac{1}{4}$	8 25		☉'s 2d Limb: good.
			20 10 10			{ About 25' S. of ☉'s center, and about the 4th Mag. } The first of these is probably α, and the second γ Capricorni: I cannot find the third in any Catalogue. W.W.
			20 11 59 $\frac{1}{2}$			
			20 17 14 $\frac{3}{4}$			
			20 37 49 $\frac{3}{4}$	39 0 $\frac{3}{4}$		
		36 37 $\frac{1}{2}$	21 9 59 $\frac{5}{8}$	11 56 $\frac{1}{2}$		δ } Navis: below the Pole.
		8 3 $\frac{1}{2}$	3 14 8			β }
☽ — 12.	12 40 $\frac{1}{2}$	13 23 $\frac{3}{8}$	16 22 $\frac{5}{8}$	17 6 $\frac{3}{4}$	17 50 $\frac{1}{4}$	☉'s First L.
			6 34 55 $\frac{1}{4}$		36 22 $\frac{1}{4}$	☉'s Second L.
	33 28		7 26 8 $\frac{1}{8}$	26 50 $\frac{1}{4}$		Syrius.
		25 25 $\frac{1}{2}$	7 30 6 $\frac{3}{4}$			Procyon.
			8 16 31 $\frac{5}{8}$	17 52 $\frac{1}{4}$		Pollux.
		15 9 $\frac{1}{2}$				ε Navis: above the Pole.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

1773.	Transits of the Sun, Moon, and Stars, over the Meridian. Times by the Clock C.					Phenomena and Remarks.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	"	"	H "	"	"	
8 May 12.		35 54	8 37 6	38 17 $\frac{1}{2}$		δ } Navis: above the Pole.
			9 9 17 $\frac{1}{4}$			β } Hydrae.
		14 20 $\frac{1}{4}$	9 15 3 $\frac{1}{4}$	15 45 $\frac{3}{4}$		Regulus.
		54 6 $\frac{3}{4}$	9 54 50 $\frac{1}{4}$	55 33 $\frac{1}{2}$		α Ophiuchi.
			17 22 32 $\frac{1}{2}$			Canopus: below the Pole.
		15 47	18 16 55 $\frac{5}{8}$	18 5		
		32 44 $\frac{3}{4}$	19 33 27 $\frac{3}{4}$	34 10 $\frac{1}{2}$		γ } Aquilæ.
	36 17 $\frac{3}{4}$	36 59 $\frac{1}{4}$	19 37 42 $\frac{1}{8}$	38 24 $\frac{1}{8}$	39 6 $\frac{1}{4}$	α } Aquarii.
		41 26 $\frac{3}{8}$	19 42 8 $\frac{3}{4}$	42 51 $\frac{1}{8}$		β } 's 2d Limb: good.
		54 23 $\frac{3}{4}$	20 55 6 $\frac{3}{4}$	55 49 $\frac{3}{4}$		β } Navis: below the Pole.
	56 23	57 6 $\frac{1}{4}$	20 57 50 $\frac{1}{4}$	58 34	59 17	γ } Aquarii.
			21 8 29			δ } 's 1st L.
			21 39 15 $\frac{1}{2}$			β } 's 2d L.
		51 15	21 51 57 $\frac{1}{2}$	52 39 $\frac{1}{2}$		α Orionis.
14 — 13.	15 5 $\frac{1}{2}$	15 48 $\frac{1}{2}$	3 16 33 $\frac{1}{2}$		20 15 $\frac{1}{2}$	Canopus.
			18 47 $\frac{3}{4}$	19 32 $\frac{3}{4}$		
		39 31	5 40 13 $\frac{3}{4}$	40 56		
		15 2 $\frac{3}{8}$	6 16 12 $\frac{1}{4}$	17 21 $\frac{1}{4}$		
			8 15 1 $\frac{1}{2}$			
			8 35 35 $\frac{3}{4}$			
			8 51 48 $\frac{3}{4}$			
			9 7 46			
		11 1 $\frac{3}{4}$	9 12 14	13 25 $\frac{3}{4}$		
		36 56 $\frac{1}{4}$	9 38 32 $\frac{3}{4}$	40 8 $\frac{3}{4}$		
	51 56	52 37 $\frac{3}{4}$	9 53 21 $\frac{1}{2}$	54 4 $\frac{1}{4}$	54 47 $\frac{1}{4}$	Regulus.
			10 31 59 $\frac{3}{4}$			
			10 33 23 $\frac{1}{4}$			
		32 55 $\frac{1}{4}$	8 34 7 $\frac{1}{4}$	35 18		δ } Navis: above the Pole.
			9 6 18			β } Regulus.
			9 10 45			γ } Navis: above the Pole.
			9 37 3 $\frac{5}{8}$			μ } Crateris.
		51 8 $\frac{3}{4}$	9 51 52 $\frac{3}{4}$	52 35 $\frac{3}{4}$		
			10 30 30 $\frac{1}{4}$			
			10 31 53 $\frac{3}{4}$			
			10 32 39 $\frac{3}{4}$			
		43 33 $\frac{1}{4}$	10 44 17 $\frac{3}{4}$	45 1 $\frac{3}{4}$		

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

1773-	Transits of the Sun, Moon, and Stars, over the Meridian. Times by the Clock C.					Phenomena and Remarks.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	"	"	H "	" "	" "	
☿ May 14.		31 59 $\frac{1}{4}$	20 33 10	34 21 $\frac{3}{8}$		☿ } Navis : below the Pole*.
♂ — 15.		20 46	21 9 48 $\frac{1}{4}$	22 10 $\frac{5}{8}$		Procyon.
	8 59 $\frac{3}{4}$	9 40 $\frac{1}{4}$	7 21 28 $\frac{1}{2}$	11 5 $\frac{3}{4}$	11 47 $\frac{1}{4}$	☿ Navis : above the Pole.
		33 45 $\frac{1}{2}$	8 32 26 $\frac{1}{2}$	36 58 $\frac{1}{4}$		♂ Hydræ.
			9 10 23 $\frac{3}{8}$			☿ Navis : above the Pole.
			9 35 22 $\frac{5}{8}$			Regulus.
			9 50 10 $\frac{3}{4}$			Spica Virginis.
♂ — 17.			13 4 1 $\frac{3}{4}$			Arcturus.
	28 39 $\frac{5}{8}$	29 20 $\frac{3}{4}$	13 56 1	30 46 $\frac{1}{4}$	31 28	♂ Aquilæ.
			19 30 4 $\frac{1}{8}$			Fomalhaut.
		53 41 $\frac{3}{4}$	22 35 13 $\frac{1}{2}$	55 8 $\frac{1}{2}$		☿'s 2d L.
			0 54 24 $\frac{3}{4}$			♂ Eridani : above the Pole.
♂ — 18.	27 11	27 54 $\frac{1}{2}$	1 19 14:	29 24 $\frac{1}{4}$		☿'s 1st L.
		30 9 $\frac{3}{4}$	3 28 39 $\frac{1}{2}$	31 39 $\frac{5}{8}$	32 23 $\frac{1}{4}$	☿'s 2d L.
		5 13 $\frac{1}{4}$	3 30 55	6 38 $\frac{5}{8}$		♂ Hydræ.
	44 17 $\frac{3}{4}$	44 59 $\frac{1}{4}$	9 5 56	46 26 $\frac{1}{2}$	47 8 $\frac{3}{4}$	Regulus.
	25 23	26 5 $\frac{3}{4}$	9 45 43 $\frac{3}{8}$	27 33	28 16 $\frac{1}{4}$	♂ Leonis.
			11 26 49 $\frac{3}{4}$			☿ } Crucis.
		22 36 $\frac{3}{4}$	12 8 4 $\frac{1}{2}$	25 19 $\frac{1}{4}$		♂ } Spica Virginis.
	1 7 $\frac{5}{8}$	1 49 $\frac{1}{2}$	12 23 58	3 14 $\frac{1}{2}$	3 56 $\frac{3}{4}$	Arcturus.
			13 2 32 $\frac{3}{8}$			♂ Centauri.
		12 11 $\frac{3}{8}$	13 54 31 $\frac{3}{4}$	14 59 $\frac{1}{4}$		☿ Navis.
		22 2 $\frac{1}{4}$	14 13 36	25 9 $\frac{1}{4}$		Fomalhaut.
	32 6 $\frac{1}{2}$	32 54	20 24 35 $\frac{1}{2}$	34 32 $\frac{3}{8}$	35 20 $\frac{1}{4}$	♂ Eridani : below the Pole.
		16 20 $\frac{3}{8}$	20 33 43 $\frac{1}{4}$	19 1		☿'s 1st L.
♂ — 19.	29 39	30 22 $\frac{3}{4}$	1 17 41 $\frac{1}{4}$	31 52 $\frac{3}{4}$		☿'s 2d L.
		32 38 $\frac{1}{2}$	3 31 8	34 8 $\frac{1}{4}$	34 51 $\frac{1}{2}$	Syrius.
	21 51 $\frac{3}{8}$	22 33 $\frac{3}{4}$	3 33 28 $\frac{1}{2}$	24 1 $\frac{3}{4}$	24 44 $\frac{1}{2}$	Procyon.
			5			☿ } Navis.
		25 16	7 15 30 $\frac{3}{4}$	27 39 $\frac{1}{8}$		♂ } Hydræ.
			8 26 28			Regulus.
		3 42 $\frac{3}{4}$	8 58 38 $\frac{1}{2}$	5 7 $\frac{3}{4}$		☿ Navis.
			9 4 25 $\frac{3}{4}$			♂ Leonis.
			9 44 13 $\frac{1}{4}$			Spica Virginis.
	23 53 $\frac{1}{4}$	21 17 $\frac{3}{8}$	10 22 51 $\frac{1}{8}$	24 24	26 46 $\frac{3}{8}$	♂ Eridani.
		24 35 $\frac{3}{4}$	11 25 19 $\frac{3}{4}$			
			13 1 2 $\frac{1}{4}$			
		15 36 $\frac{1}{4}$	13 16 55	18 16		

* Mr. Bayley remarks that the Clock appears to have lost 12" more than its usual rate between the transits of Regulus and ☿ Navis, which is obvious enough; and it is farther manifest, on examining the Observations, that it happened between the transits of α Crateris and ☿ Navis: Mr. Bayley farther remarks, that he is certain the Clock was not disturbed by any means whatever, as he was in the Observatory during the whole interval, and no other person but himself all that time.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

The Error of the Transit Instrument deduced from Observations of Circum-polar Stars.

1773.	Transit above the Pole.			Transit below the Pole.			Interval by the Clock between the Observations.			Clock loses between the Observations.	Error of Instrument where the * passed.	Phenomena and Remarks.
	H	"	"	H	"	"	H	"	"			
April 26.	25	30	31,22	13	31	12,69	11	59	18,23	44,56	1,46	α Eridani.
— 29.	6	16	57,37	18	16	11,81	11	59	14,44	44,64	0,46	Canopus.
May 1.	33	5	34,56	21	6	16,50	11	59	18,06	44,07	1,06	β Navis.
— 3.	9	2	37	21	1	53,69	11	59	16,69	44,29	0,49	β Navis.
— 4.	33	1	8,53	21	1	53,69	11	59	14,84	44,37	0,39	β Navis.
— 5.	25	17	11,38	13	17	55	11	59	16,38	44,83	0,60	α Eridani.
— 6.	14	13	7	26	12	22	11	59	15,0	44,83	0,09	α Centauri.
— 6.	8	5	25,5	20	4	40,19	11	59	14,69	44,82	0,25	ϵ } Navis.
— 6.	8	58	10,79	20	57	25,38	11	59	14,59	44,82	0,30	β } Navis.
— 7.	25	15	42,38	13	16	26,06	11	59	16,32	44,82	0,57	α Eridani.
— 7.	1	15	42,38	13	14	57,0	11	59	14,62	44,81	0,29	α Eridani.
— 8.	25	14	12,94	13	14	57,0	11	59	15,94	44,81	0,38	α Eridani.
— 8.	1	14	12,94	13	13	28,0	11	59	15,06	44,32	0,32	α Eridani.
— 9.	25	31	14,25	13	31	58,0	11	59	16,25	44,56	0,40	α Eridani.
— 12.	33	16	31,25	20	17	14,75	11	59	16,50	44,74	0,62	ϵ Navis.
— 12.	33	37	05,88	20	37	49,44	11	59	16,44	44,74	0,59	δ } Navis.
— 12.	33	9	17,25	21	9	59,81	11	59	17,44	44,74	1,09	β } Navis.
— 12.	9	9	17,25	21	8	29,0	11	59	11,75	44,74	1,75	β Navis.
— 13.	33	7	46,0	21	8	29,0	11	59	17,0	44,55	0,78	β } Navis.
— 13.	33	38	32,75	21	39	15,50	11	59	17,25	44,55	0,90	ν } Navis.
— 18.	1	17	40,97	13	16	55,56	11	59	14,59	44,90	0,26	α Eridani.

The mean of all the Observations of Achernar is $0'',536$, of β Navis $0'',587$, of ϵ Navis $0'',453$; Canopus gave $0'',46$, α Centauri $0'',09$, δ Navis $0'',59$, and ν Navis $0'',9$; and hence the angle under which the instrument cut the meridian at the zenith will be $6''\frac{1}{2}$, $4''\frac{1}{2}$, $5''\frac{1}{4}$, $7''$, $1''$, $8''\frac{1}{2}$, and $8''\frac{3}{4}$ respectively; the mean of all which is $6''$ of a degree; and so much the Northern semi-circle of the vertical, wherein the instrument moved was to the Eastward of the true meridian. Mr. Bayley remarks that the instrument was carefully kept to two marks, one about a mile and quarter off to the Northward, and the other to the Southward, at about the distance of four miles and an half, from which it seldom deviated the breadth of one of the wires.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Meridian Zenith Distances of the Sun, Moon, and Stars, for determining the Latitude.

1773.	Zenith Distances.			Exterior Arch reduced.	Barom.	Therm.		Latitude deduced.	Phenomena.
	Interior Arch.	Exterior Arch.	G S V			In Tent.	Out.		
24 April 29.	55 50 0								☉'s L. L.
	55 18 20	58 3 30+	4	55 18 12	30,18	62	54	41 5 46,4	☉'s U. L.
	31 6 42	33 0 24	0	31 6 48	30,04	52	47	41 5 36,4	Spica Virginis.
	61 26 3	65 2 4-	5	61 26 3	30,04	52	47	41 5 31,2	Arcturus.
2 May 1.	56 26 23	60 0 26	0	56 26 25½	30,35	67	59	41 5 24,5	☉'s L. L.
	55 54 27								☉'s U. L.
	51 3 29	51 1 27+	6	51 3 31½	30,32	57	53		{ ☉'s L. L. 20" after Tranfit.
☉ — 2.	56 44 30								☉'s L. L.
	56 12 27	59 3 26+	10	56 12 32	30,05	56	54½	41 5 30,2	☉'s U. L.
♂ — 4.	57 20 3								☉'s L. L.
	56 47 53	60 2 11	0	56 47 57½	29,96	71	59½	41 5 45,4	☉'s U. L.
♀ — 5.	57 37 22								☉'s L. L.
	57 5 32	60 3 19-	6	57 5 26	29,70	64	57	41 5 41,8	☉'s U. L.
	32 45 35	34 3 24+	20	32 45 33	29,92	49	46		{ ☉'s L. L. 20" after Tranfit.
	61 26 26	64 2 5-	13	61 26 21	29,90	47	45	41 5 55,1	Arcturus.
	49 21 40	52 2 19+	24	49 21 27	29,90	47	45	41 5 38,6	α Aquilæ.
24 — 6.	57 54 4								☉'s L. L.
	57 22 0	61 0 24+	13	57 22 1	30,27	65	54	41 5 40,7	☉'s U. L.
	56 54 40	60 2 26	0	56 54 27	30,30	49	50	41 5 46,5	β Leonis.
	80 24 44	85 3 5	0	80 24 45	30,31	48	49	41 6 8,5	{ Achernar below the Pole.
	61 26 16	65 2 4	0	61 26 8½	30,31	48	49	41 5 4,45	Arcturus.
	28 42 33	30 2 16	0	28 42 39½	30,32	49	49		{ ☉'s L. L. 19" after Tranfit of 1st L.
♀ — 7.	58 10 20								☉'s L. L.
	57 39 10	61 2 0-	18	57 39 4½	30,31	65	56	41 5 42 3	☉'s U. L.
♂ — 8.	58 26 26								☉'s L. L.
	57 55 15	61 3 4	0	57 55 12	30,06	66	57½	41 5 25,2	☉'s U. L.
	61 26 17	65 2 4	0	61 26 8½	29,98	55	56	41 5 41,9	Arcturus.
	68 32 27	73 0 15-	8	68 32 42½	29,98	55	56	41 5 34,8	α Cor. Borealis.
☉ — 9.	58 43 14								☉'s L. L.
	58 11 16	62 0 9-	11	58 11 16	30,04	64	58½	41 5 46,0	☉'s U. L.
	56 54 40	60 2 26+	5	56 54 38	30,06	60	56	41 5 49,3	β Leonis.
	20 44 21	22 0 15+	25	20 44 30½	30,06	51½	51½	41 6 2,7	{
	17 20 45	18 2 0+	5	17 20 42½	30,06	51½	51½	41 6 6,0	Crucis.
	80 24 48	85 3 3+	10	80 24 45½	30,06	51½	51½	41 6 13,0	{ Achernar, below the Pole.
	18 46 57	20 0 5-	6	18 47 7	30,06	51½	51½	41 6 10,2	α Centauri.
	23 24 18	24 3 28-	6	23 24 23½	29,95	53	53		{ ☉'s L. L. 20" before tranfit of her latter L.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

1773.	Zenith Distances.			Exterior Arch reduced.	Barom.	Therm.		Latitude deduced.	Phenomena.
	Interior Arch.	Exterior Arch.	G S V			In.	Out.		
May 10.	58 59 23								☉'s L. L.
	58 27 12	62 1 13	—	12 58 27 4½	29,81	70	58½	41 5 53,4	☉'s U. L.
	24 18 16	25 3 22	—	5 24 18 21½	29,90	48	48½		{ ☉'s L. L. 24" before transit of her latter L.
— 11.		63 0 24	—	11 59 14 7	30,10	48	54	41 5 49,6	☉'s L. L.
	58 43 5	62 2 17		0 58 43 6					☉'s U. L.
	26 18 54	28 0 9		0 26 18 57	30,30	45	44		{ ☉'s L. L. 22" before transit of her latter L.
— 12.	59 29 33				30,30	56	53	41 5 40,3	☉'s L. L.
	58 57 41	62 3 18	+	10 58 57 46	30,10	45½	45		☉'s U. L.
	29 9 13	31 0 13	—	10 29 9 18	30,10	45½	45		{ ☉'s L. L. 24" before transit of her latter L.
— 13.	59 44 32				30,18	62	54	41 5 32,0	☉'s L. L.
	59 12 18	62 0 20	—	10 59 12 22½					☉'s U. L.
— 14.	59 59 14	63 3 30		0 59 59 7	30,29	64	54½	41 5 41,6	☉'s L. L.
	59 27 28	63 1 22	—	8 58 27 21					☉'s U. L.
	17 20 36	18 2 0		0 17 20 37½	30,30	49½	49	41 6 11	β Crucis.
	11 12 18	11 3 26		0 11 12 22	30,30	49½	49	41 5 50½	Centauri.
	80 24 45	85 3 3		0 80 24 45½	30,30	49½	49	41 6 9	{ Achernar, below the Pole.
	18 9 46	19 1 16		0 18 9 50½	30,30	49½	49	41 6 0	β Centauri.
— 15.	60 13 36	64 0 31		0 60 13 37½	30,20	64	58	41 5 44	☉'s L. L.
	59 41 24	63 2 22		0 59 41 32½					☉'s U. L.
— 17.	48 4 10	51 1 4	—	18 48 4 16	29,48	42½	43		{ ☉'s L. L. 23" before transit of her latter L.

The mean of all these Latitudes, Mr. Bayley makes $41^{\circ} 5' 47\frac{1}{4}"$ South. If a mean of the 24 Observations of the Sun and Stars, to the Northward of the zenith, be taken, and also of the nine Observations of Stars to the South of the zenith, and then a mean of these two means be taken for the Latitude, it will be found $41^{\circ} 5' 53\frac{1}{4}"$ South.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Lunar Observations for the Longitude of the Place.

1773.	Time by the Clock.		Distance of the ☉'s and ☽'s Limbs.	Zenith Distance ☉'s U. L.	Altit. of ☽'s U. L.	Barom.	Therm.		Longitude East.	Remarks.	
	H	' "	' "	' "	' "		In Tent.	Out.	' "		
4 April 29.	5	32 20	79 52 30	70 16 50	23 34	30,14	53	50	174 14 0	Hazy.	
		35 46	52 50	70 46 50	23 45						
		38 35	53 40	71 11 12	24 15						
			— 4 30		+ 3½	Errors of the Quadrants.					
5 May 1.	6	37 22	104 35 30	79 59 40	23 28	30,32	52	54½	173 50 37½	Clear, and the Objects distinct.	
		41 24	104 36 34	80 37 35	24 3						
		44 54	104 37 20	81 12 30	24 32						
			Supplemental Distance ☉ and ☽'s L.	Zenith Distance ☽'s U. L.	Alt. of the ☉'s L. L.						
5 — 8.	22	58 26,8	30 37 0	75 42 49	7 56	30,01	56	52½		Mean of 5 Obs.	
	23	11 30½	30 42 53	77 57 14	9 58¼	30,01	56	52½		Mean of 4.	
	23	22 18	30 49 31	79 49 47	11 36¼	30,01	56	52½		Mean of 4.	
			— 58		+ 2½	Errors of the Quadrants.					
6 — 9.	23	30 7,8	44 32 44	70 2 49	12 13½	29,95	61	57½		Mean of 5 Obs.	
	23	44 22,8	44 39 34	72 35 46	14 18½	29,95	61	57½		Ditto of 5.	
	23	55 30¾	44 45 46	74 36 28	15 52	29,95	61	57½		Ditto of 4.	
	0	4 50	44 50 29	76 14 57	17 9	29,95	57	61½		Ditto of 4.	
	0	13 45¼	44 56 17½	78 7 0	18 30½	29,95	57	61½		Ditto of 4.	
			— 1 00		+ 2½	Errors of the Quadrants.					
7 — 10.	0	35 30,8	58 18 27	72 40 4	20 44¼	29,82	64	56		Mean of 5 Obs.	
	0	47 12	58 24 31	73 47 12	22 0½	29,82	64	56		Ditto of 4.	
	0	56 39¾	58 30 1½	75 24 2	23 3¼	29,82	64	56		Ditto of 4.	
	1	4 48	58 34 36	76 51 32	23 54½	29,82	64	56		Ditto of 4.	
	1	13 39	58 39 16	78 25 44	24 50	29,82	64	56		Ditto of 4.	
			— 1 0		+ 2½	Errors of the Quadrants.					
			Dist. ☉ and ☽'s nearest Limbs.	Zenith Distance ☽'s U. L.	Altit. ☉'s L. L.						
8 — 11.	23	35 9	109 30 45	51 35 56	11 58	30,07	54	47	173 58 1½	Very clear.	
		37 38	29 42	52 2 41	12 18						
		39 46	29 0	52 25 7	12 37						
		42 11	28 30	52 51 16	12 57						
		44 17	27 22	53 13 43	13 15						
		46 3	26 37	53 32 36	13 31						
			— 4 19½		+ 2 50						

ASTRONOMICAL OBSERVATIONS.

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Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Lunar Observations for the Longitude of the Place.

1773.	Time by the Clock.		Distance of the ☉ and ☾'s Limbs.			Zenith Distance ☾'s U. L.			Altit. of ☉'s L. L.		Barom.	Therm		Longitude East.	Remarks.				
	H	"	°	'	"	°	'	"	°	"		InTent.	Out.						
♂ May 11.	23	48	02	109	25	54	53	54	28	13	49	30,07	54	47	174	2	46½	During all these Observations, the air was clear, and the objects very distinct.	
		50	17		25	30	54	18	53	14	7								
		52	43		23	58	54	45	10	14	28								
		55	20		22	56	55	13	24	14	50								
		57	34		22	15	55	37	26	15	9								
	0	0	11		20	25	56	5	27	15	31	30,07	54	47	173	53	33		
	0	2	49	109	20	0	56	34	19	15	52								
		5	6		18	58	56	59	40	16	12								
		7	30		18	10	57	25	30	16	32								
		10	7		16	42	57	54	21	16	51								
		12	13		14	50	58	16	42	17	10	30,07	54	47	173	38	36		
		14	30		14	0	58	41	33	17	28								
	0	17	10	109	13	6	59	10	47	17	48								
		19	49		12	22	59	40	0	18	8								
		22	10		10	50	60	5	58	18	27								
		24	24		9	52	60	30	20	18	46	30,07	54	47	173	38	36		
		26	55		8	20	60	57	42	19	5								
		29	20		7	25	61	24	20	19	23								
					—	4	19½				+	2'	50" Errors of the Quads.						
♀ — 12.	23	32	42	97	8	25	44	7	22	10	58	30,25	54	54½	174	19	10	During all these Observations, the air was clear, and the objects very distinct.	
		35	21		7	18		32	38	11	21								
		37	57		5	54	57	26	11	43									
		40	45		4	52	45	25	56	12	6								
		43	2		4	0	48	30	12	28									
♀ — 14.	2	28	21	72	50	40	52	21	32	24	22	30,31	47	48	174	11	30		During all these Observations, the air was clear, and the objects very distinct.
		33	27		49	10	53	9	20	24	50								
		37	8		48	40	53	44	36	25	8								
		40	0		47	26	54	9	56	25	24								
		42	26		45	36	54	34	28	25	37								
	2	44	55	72	44	50	54	58	30	25	48	30,31	47	48	173	51	51		
		50	49		42	40	55	57	0	26	18								
		54	2		41	34	56	30	35	26	32								
		59	26		40	0	57	25	24	26	55								

Errors as before.

* * The height of the eye, above the sea, was, at a medium, 85 feet.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Observations of different Sorts for the Longitude of the Place.

1773. 24 May 6.	Jupiter's 2d satellite immersed at 19 h. 52' 57" by the Clock, or at 17 h. 10' 23" 6 apparent time. At the time of this Observation, the air was very clear, and the limbs of the planet, as well as its belts, exceedingly distinct and well defined; the magnifying power used was 150 times.
8 — 12.	Aquarii immersed behind the Moon's bright limb at 19 h. 11' 16" $\frac{1}{2}$, or at 15 h. 54' 45" apparent time: the magnifying power used was 90 times. Emerfion from the dark limb at 20 h. 33' 58" $\frac{1}{2}$, or 17 h. 16' 58" $\frac{1}{3}$ apparent time. These Observations also are very good, the air being very clear, and the objects distinct and well defined: the same magnifying power was used as at the imerfion.

Observations for the Dip of the Magnetic Needle.

1773.	Face of the Instru- ment.		After changing the Poles of the Needle.		Mr. Bayley had here the same troublesome business with his dip- ping needle that we had at the Cape of Good Hope: for he remarks, that after labouring a whole day to ba- lance it, he found himself just where he began, and that he balanced it, after all, by discharging the magne- tism, and adjusting the needle to an equilibrium, first, in an horizontal position, by means of the balls which are on the wires, that have the same direction with the needle, and then in a vertical position, by means of those which are on the wires at right angles to it. The mean of all the dips, before the poles were changed, is $64^{\circ} 53' 8''$; the mean of all afterwards $64^{\circ} 35'$: the mean of both is $64^{\circ} 44' 4''$.
	East.	West.	Face of the Instru- ment.		
	°	°	East.	West.	
	64 35	64 30			
	65 0	64 45			
	64 49	64 46	64 21	64 36	
	64 52	64 25	64 37	64 15	
	64 54	64 35	64 32	64 20	
	64 37	65 1	64 20	64 27	
	65 3	65 0	64 29	64 39	
	64 45	65 0	64 50	64 26	
	64 45	64 43	64 54	64 49	
	64 30	64 35	64 45	64 52	
	64 25	64 36	64 19	64 50	
	64 50	64 32	64 22	64 28	
	64 53	64 54	64 40	64 41	
	64 35	64 37	64 47	64 40	
	65 0	65 0			
	64 47	64 43			

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Observations for the Variation of the Compass.

1773.	Zenith Distance ☉'s U. L.	Azimuth of the ☉'s center.	Variation East.	The following Variations were obtained by placing the Compass in the meridian, and turning its index to the Northern and Southern meridian marks alternately.			
				Vari- ation East.	Vari- ation East.	Vari- ation East.	Vari- ation East.
☉ May 2.	80 30 32	N. 46 30 E.	13 24 $\frac{3}{4}$	13 30	13 45	13 40	13 50
	79 55 4	46 18		13 35	13 46	13 35	13 53
	79 31 52	45 25		14 0	13 25	13 40	13 47
	79 14 3	45 8		13 44	13 20	13 17	13 44
	78 58 37	45 2		13 40	13 42	13 19	13 40
	78 40 31	44 57	13 08 $\frac{7}{8}$	13 30	13 50	13 42	13 20
☿ — 8.	80 6 36	N. 43 40 E.		13 35	13 45	13 27	13 27
	79 37 36	43 25		13 37	13 30	13 29	13 42
	79 18 24	43 15		13 47	13 29	13 36	13 29
	79 3 35	42 50		13 50	13 41	14 08	13 19
	78 42 48	42 35	13 16	13 27	13 37	13 46	13 48
	78 20 10	42 0		13 19	13 35	13 40	13 50
♂ — 19.	78 7 0	41 55		13 15	13 38	13 35	13 41
	76 0 0	N. 34 15 E.		The mean of all these gives the variation 13° 38', $\frac{3}{4}$ E.			
	75 40 38	34 0					
	75 27 15	33 40	13 40 $\frac{1}{2}$				
♂ — 20.	75 47 38	N. 61 15 W.					
	76 6 40	61 20					
	76 37 10	61 26					
	76 51 50	61 47					
	77 10 15	61 54	13 21 $\frac{2}{3}$				
	77 29 20	63 0					
	77 43 0	63 25					
	77 59 40	63 36					
	78 24 18	64 06					
	78 35 20	64 15	13 21 $\frac{2}{3}$				
	78 56 20	65 0					
	79 15 25	65 20					
	79 37 15	65 40					
	80 0 0	65 45					

By Observations of Amplitudes.

1773.	Amplitude of the ☉'s center.	Vari- ation East.
☿ May 7.	N. 54 3 E.	13 25 $\frac{1}{3}$
☿ — 12.	52 20	13 18
♂ — 13.	52 0	13 18
☿ — 14.	51 44	13 39
♂ — 18.	50 15	13 25 $\frac{1}{3}$
☿ — 19.	50 05	13 17
♂ — 20.	49 55	13 09
The mean is		13 21 $\frac{2}{3}$
And the mean of all gives the variation of the Compass 13° 31' 16" East.		

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Observations on the Tides.

1773.	Time by the Clock	Appa- rent Time.	Height of the Water.	Remarks.	1773.	Time by the Clock	Appa- rent Time.	Height of the Water.	Remarks.
	H ' "	H ' "	F. I.			H ' "	H ' "	F. I.	
May 3.	21 15		3 6 $\frac{1}{4}$	Wind still, and water smooth.	May 5.	0 0		4 4	
	21 20		3 6 $\frac{3}{4}$			0 10		4 3	
	21 30		3 7 $\frac{1}{2}$			0 20		4 2	
	21 35		3 7,7			0 30		4 1	
	21 40		3 7,8			0 40		3 11	
	21 45		3 7,8		May 6.			0 0 $\frac{1}{4}$	Low Water.
	21 50		3 7,8			10 50		4 1 $\frac{3}{4}$	
	21 55		3 7,8			11 0		4 2	Calm, and the Water smooth.
	22 0		3 7 $\frac{1}{2}$			11 10		4 2 $\frac{1}{2}$	
	22 10		3 7			11 20		4 3	
	22 20		3 6 $\frac{1}{4}$	Weather as above.		11 30		4 3	
May 7.	9 30		3 9			11 35		4 3,2	
	9 35		3 10			11 40		4 3	
	9 55		3 10,5			11 50		4 2 $\frac{1}{2}$	
	10 0		3 10 $\frac{3}{4}$			12 0		4 1 $\frac{1}{2}$	Below o.
	10 10		3 11		Low Water.			0 1	
	10 20		3 11 $\frac{1}{2}$			23 30		4 2 $\frac{1}{2}$	Calm, and the Water smooth.
	10 30		3 11			40		4 3	
	10 40		3 11			50		4 4	
	10 45		3 10			0 0		4 4	
	10 55		3 9			10		4 4	
	21 50		4 2	Blowing strong, with some swell.		20		4 4	Below o.
	22 0		4 3			30		4 3 $\frac{1}{2}$	
	22 7		4 3,7			40		4 2 $\frac{3}{4}$	
	22 15		4 4,1		May 7.	Low Water.		0 2 $\frac{1}{4}$	
	22 20		4 4,5			11 35		4 5 $\frac{1}{2}$	Fine weather, and the wa- ter still.
	22 25		4 4,5			11 45		4 6 $\frac{1}{2}$	
	22 35		4 4,5			11 50		4 7	
	22 45		4 4,5			12 0		4 7 $\frac{1}{4}$	
	22 50		4 4,0			12 10		4 7 $\frac{1}{2}$	
	22 55		4 3,7	Strong wind, and much swell.		12 25		4 7 $\frac{1}{2}$	Below o.
	23 5		4 3,0			12 30		4 7 $\frac{1}{2}$	
	23 15		4 2,0			12 40		4 7 $\frac{1}{2}$	
May 5.	22 30		3 11 $\frac{1}{4}$			12 45		4 7	
	22 45		4 0 $\frac{1}{2}$			12 50		4 6 $\frac{1}{4}$	
	22 50		4 1			13 0		4 5 $\frac{1}{2}$	Weather, &c. as above.
	23 10		4 1 $\frac{3}{4}$		Low Water.			0 3	
	23 15		4 2 $\frac{1}{4}$			0 5		4 7 $\frac{1}{4}$	
	23 25		4 3 $\frac{1}{4}$			0 20		4 8 $\frac{1}{2}$	
	23 30		4 4			0 25		4 9	
	23 40		4 4			0 30		4 9 $\frac{1}{4}$	
	23 50		4 4			0 40		4 9 $\frac{1}{4}$	

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Observations on the Tides.

1773.	Time by the Clock	Appa- rent Time.	Height of the Water.		Remarks.	1773.	Time by the Clock	Appa- rent Time.	Height of the Water.		Remarks.
			F.	I.					F.	I.	
♀ May 7.	0 50		4	9 $\frac{1}{4}$		♂ May 9.	2 40		4	7 $\frac{3}{4}$	
	1 0		4	9			2 50		4	7 $\frac{1}{2}$	
	1 10		4	8 $\frac{1}{2}$			3 0		4	6 $\frac{1}{2}$	
	1 20		4	7 $\frac{1}{4}$			3 5		4	5 $\frac{3}{4}$	
♂ — 8.	Low Water.		0	4 $\frac{1}{2}$	Below o.	♂ — 10.	Low Water.		0	0 $\frac{1}{2}$	Below o.
	12 30		4	9			Strong wind all night, and so high a sea that I could not come near the Instrument.				
	12 40		4	10,4		♂ — 11.	2 30		3	9	
	12 50		4	11,2			2 40		3	10	Strong wind,
	13 10		5	1	Weather,		3 10		3	11 $\frac{1}{2}$	and the water
	13 15		5	1,1	&c. as above.		3 20		4	0	very rough.
	13 25		5	1			3 30		4	0	
	13 35		4	11,2			3 40		3	11 $\frac{1}{2}$	
	13 40		4	10,4			3 50		3	10	
	13 55		4	9			4 0		3	9	
	Low Water.		0	5 $\frac{1}{2}$	Below o.		Weather too bad to observe all night, and every day afterwards until the 15th.				
	1 0		4	4 $\frac{1}{2}$		♂ — 15.	5 40		2	10	
	1 10		4	6			5 55		2	10 $\frac{1}{2}$	
	1 20		4	7	Before these		6 10		2	10 $\frac{3}{4}$	
	1 30		4	7 $\frac{1}{2}$	the Clock		6 20		2	11	Weather
	1 40		4	7 $\frac{1}{2}$	had been put		6 40		2	11 $\frac{1}{2}$	fine and
	1 50		4	7	20' forward.		7 0		2	11 $\frac{1}{2}$	wind still.
	2 0		4	5 $\frac{1}{2}$			7 20		2	11 $\frac{1}{2}$	
	2 10		4	5			7 30		2	11	
♂ — 9.	Low Water.		0	3,4	Below o.		7 40		2	10	
	13 30		4	8 $\frac{3}{4}$		♂ — 17.	7 0		3	2	
	13 40		4	9 $\frac{1}{2}$			7 10		3	4	Weather
	13 50		4	11			7 30		3	5 $\frac{1}{4}$	serene and
	14 0		4	11 $\frac{1}{4}$			7 40		3	5 $\frac{1}{2}$	quiet.
	14 5		4	11 $\frac{3}{4}$			7 50		3	5 $\frac{1}{2}$	
	14 15		4	11 $\frac{3}{4}$			8 0		3	5 $\frac{1}{4}$	
	14 25		4	11 $\frac{3}{4}$			8 30		3	4	
	14 30		4	11 $\frac{1}{2}$			8 50		3	2	
	14 35		4	10 $\frac{3}{4}$			Low Water.		0	0 $\frac{1}{2}$	
	14 40		4	9 $\frac{1}{2}$			21 30		3	9 $\frac{1}{2}$	
	14 50		4	9	Below o.		21 42		3	10	
	Low Water.		0	2 $\frac{1}{2}$			21 50		3	10 $\frac{1}{2}$	
	1 50		4	6			22 0		3	11	
	2 0		4	6 $\frac{1}{4}$							
	2 10		4	6 $\frac{3}{4}$							
	2 20		4	7 $\frac{1}{2}$	Moderate						
	2 30		4	7 $\frac{3}{4}$	weather						

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Observations on the Tides.

1773.	Time by the Clock	Apparent Time	Height of the Water.	Remarks:	1773.	Time by the Clock	Apparent Time	Height of the Water.	Remarks.
	H'	H'	F. I.			H'	H'	F. I.	
D May 17.	22 10		3 11	Weather calm and serene: The Moon above the horizon.	♂ May 19.	0 30		4 11 $\frac{3}{4}$	
	22 20		3 11			0 50		4 11	
	22 30		3 10 $\frac{1}{2}$			1 0		4 10	
	22 40		3 10			1 10		4 9 $\frac{1}{4}$	
	22 50		3 9 $\frac{1}{4}$			1 20		4 8	
♂ — 18.	Low Water.		0 2 $\frac{1}{4}$	Weather good: Moon above the horizon.	24 — 20.	11 40		4 11 $\frac{1}{2}$	Weather calm, and water undisturbed.
	22 20		4 11 $\frac{1}{2}$			11 50		5 1 $\frac{1}{4}$	
	22 30		5 0 $\frac{1}{2}$			12 0		5 1 $\frac{3}{4}$	
	22 50		5 2 $\frac{1}{2}$			12 10		5 1 $\frac{3}{4}$	
	23 0		5 3			12 20		5 1 $\frac{3}{4}$	
	23 10		5 3 $\frac{1}{2}$			12 30		5 1 $\frac{1}{2}$	
	23 20		5 3 $\frac{1}{2}$			12 40		5 1	
	23 30		5 3			12 50		5 0 $\frac{1}{2}$	
	23 40		5 2			13 0		5 0	
	23 50		5 0 $\frac{1}{2}$			Low Water.		0 1 $\frac{1}{2}$	
♂ — 19.	Low Water.		4 11 $\frac{1}{2}$	Water still: Moon above the horizon.	♀ — 21.	23 50		4 10	Weather fine and water smooth: Moon above the horizon.
	0 0		1 4 $\frac{1}{4}$			0 0		4 11	
	22 40		4 8			0 10		4 11 $\frac{1}{2}$	
	22 50		4 9 $\frac{1}{4}$			0 15		4 11 $\frac{3}{4}$	
	23 0		4 10			0 20		5 0	
	23 20		4 11			0 30		5 0	
	23 30		4 11 $\frac{3}{4}$			0 40		5 0	
	23 50		5 0 $\frac{1}{4}$			0 45		4 11 $\frac{3}{4}$	
	0 0		5 0 $\frac{1}{2}$			0 50		4 11 $\frac{1}{2}$	
	0 10		5 0 $\frac{1}{2}$			1 10		4 10	
	0 20		5 0 $\frac{1}{4}$			Low Water.		0 11 $\frac{1}{4}$	

Mr. Bayley made the preceding observations, by means of a glass tube of about $\frac{7}{8}$ of an inch internal diameter, with an exceeding small aperture at the bottom to admit the water; by which means, the surface of the water in the tube was rendered so steady, as not to alter $\frac{1}{8}$ of an inch when the swell of the sea was two feet. This tube was lashed fast to a ten-foot fir-rod, divided into feet, inches, and quarters. The rod was fastened to a strong post, fixed firm and upright in the water; and he is certain he could discern a difference of $\frac{1}{8}$ of an inch in the height of the water. Mr. Bayley has not deduced the apparent times from those by the clock; but it may be readily done from the preceding Observations of equal altitudes.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Computations of the Rates which the Clock C, and Mr. Arnold's Watch, No. 1, went at.

1773.	Time by the Watch when compared.	Time by Clock C, when compared with the Watch.	Clock faster than the Watch.	Clock gain on Watch between Comparisons.	Interval between the Comparisons.	Watch loses on the Clock in 24 Hours.	Clock loses on Syderial Time per Day.	Watch loses on Syderial Time.	Watch loses on mean Time each Day.
	H	H	H	"	H	"	"	"	"
♂ April 20.	11 23	2 32 36	15 9 36	2 50	23 25	2 54,35	1 27,0	4 21,35	24,85
♀ — 21.	10 48	2 0 26	12 26	2 50	24 44	2 44,92	1 29,0	13,92	17,42
♂ — 22.	11 32	2 47 16	15 16	2 50 $\frac{1}{2}$	23 56	2 50,90	1 29,0	19,90	23,40
♀ — 23.	11 28	2 46 6 $\frac{1}{2}$	18 6 $\frac{1}{2}$	2 39 $\frac{1}{2}$	23 18	2 44,29	1 29,0	13,29	16,79
♂ — 24.	10 46	2 6 46	20 46	2 45 $\frac{1}{2}$	24 01	2 45,39	1 28,30	13,69	17,19
♀ — 25.	10 47	2 10 31 $\frac{1}{2}$	23 31 $\frac{1}{2}$	2 50	24 4	2 49,54	1 28,66	18,20	21,70
♂ — 26.	10 51	2 17 21 $\frac{1}{2}$	26 21 $\frac{1}{2}$	2 56 $\frac{1}{2}$	24 22	2 53,0	1 29,25	22,25	25,75
♀ — 27.	11 13	2 54 18	41 18	2 50	23 43	2 52,0	1 28,58	20,58	24,08
♂ — 28.	10 56	2 40 8	44 8	2 51	23 56	2 51,46	1 28,58	20,0	23,50
♀ — 29.	10 52	2 38 59	46 59	2 49	23 52	2 49,90	1 29,39	18,29	21,79
♂ — 30.	10 44	2 33 48	49 48	2 51	24 6	2 50,30	1 28,22	18,52	22,02
♀ May 1.	10 50	2 42 39	52 39	2 48	23 58	2 48,22	1 28,22	16,44	19,94
♂ — 2.	10 48	2 43 27	55 27	2 54	23 55	2 54,60	1 28,79	22,39	25,89
♀ — 3.	10 43	2 41 21	58 21	2 54 $\frac{1}{4}$	24 6	2 53,55	1 28,68	22,23	25,73
♂ — 4.	10 49	2 50 15 $\frac{1}{4}$	16 1 15 $\frac{1}{4}$	2 57	24 1	2 56,80	1 29,0	25,80	29,30
♀ — 5.	10 50	2 54 12 $\frac{1}{4}$	4 12 $\frac{1}{4}$	2 53	23 49	2 54,30	1 29,77	24,07	27,57
♂ — 6.	10 39	2 46 5 $\frac{1}{4}$	7 5 $\frac{1}{4}$	2 53 $\frac{3}{4}$	24 5	2 53,15	1 29,74	22,89	26,39
♀ — 7.	10 44	2 53 59	9 59	2 54	23 54	2 54,72	1 29,48	24,20	27,70
♂ — 8.	10 38	2 50 53	12 53	3 3	24 5	3 02,40	1 28,73	31,13	34,63
♀ — 9.	10 43	3 18 56	35 56	3 2 $\frac{1}{2}$	24 2	3 02,26	1 29,19	31,45	34,95
♂ — 10.	10 45	3 23 58 $\frac{1}{2}$	38 58 $\frac{1}{2}$	3 1 $\frac{1}{2}$	23 55	3 01,60	1 29,19	30,79	34,29
♀ — 11.	10 40	3 22 0	42 0	2 49	23 59	2 49,12	1 29,67	18,79	22,29
♂ — 12.	10 39	3 23 49	44 49	2 54	24 6	2 53,28	1 29,57	22,85	26,35
♀ — 13.	10 45	3 32 43	47 43	2 50 $\frac{1}{2}$	23 50	2 51,71	1 29,19	20,90	24,40
♂ — 14.	10 35	3 25 33 $\frac{1}{2}$	50 33 $\frac{1}{2}$	2 45 $\frac{3}{4}$	24 10	2 44,59	1 41,32	25,91	29,41
♀ — 15.	10 45	3 38 19 $\frac{1}{4}$	53 19 $\frac{1}{4}$	3 01	25 20	2 51,40	1 29,18	20,58	24,08
♂ — 16.	12 05	5 1 20 $\frac{1}{4}$	56 20 $\frac{1}{4}$	2 52 $\frac{3}{4}$	23 15	2 57,97	1 29,18	27,15	30,65
♀ — 17.	11 20	4 19 13	59 13	2 47	23 43	2 48,97	1 29,36	18,33	21,83
♂ — 18.	11 03	4 5 0	17 2 0	2 39	23 30	2 42,48	1 29,90	12,38	15,88
♀ — 19.	10 33	3 37 39	4 39	3 04	25 52	2 50,70	1 30,10	20,80	24,30
♂ — 20.	12 25	5 32 43	7 43						

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Observations made on Board the Ship, with Hadley's Quadrant.

1773.	Time by No. 1.	Altitude of the $\odot$'s L. L.	Error of the Quadrant.	Barom.	Thermoms.		Watch flow of mean Time.	Watch loses on mean Time.	Number of Ob- servations.
					C.	D.			
h May 29.	6 32 2 $\frac{5}{8}$	7 14 45	— 1 45	29,7	53	48	13 32 58,3		12
D — 31.	6 27 22	6 31 15 $\frac{1}{2}$	— 4 49	30,0	61	57	13 34 05,8	33,75	11
h June 2.	6 31 41 $\frac{2}{3}$	7 5 20 $\frac{1}{2}$	— 7 27	30,2	62	52	13 35 03,6	28,90	12
o — 6.	6 48 25	9 24 54	— 12 22 $\frac{1}{2}$	30,3	60	52	13 36 54,6	37,0	12

Mr. Bayley, by including these with the preceding computations of the Watch's rate of going, concludes that its mean rate of losing, while here, was $25''\frac{2}{3}$ a day on mean time. He farther computes that the Watch was 13 h. 28' 51'',3 too slow for mean time on Thursday, May the 20th, at noon.

He also makes his Clock to have lost at the rate of $1' 29'',003$ a day on syderial time; in which computation he rejects its loss between the 14th and 15th of May. It was set up in the same manner as at the Cape, and the bob of the pendulum was 84, 2 feet above the surface of the sea at low water. The pendulum, when first set agoing, vibrated only $1^{\circ} 50'$ on each side of o, but increased its arcs of vibration until the 26th of April, when it swung $1^{\circ} 53'$ each way, and on May 15th it had increased to $1^{\circ} 54'$. Length of the pendulum the same as at Greenwich.

Observations at Queen Charlotte's Sound, in New Zealand.

1773.	Equal Altitudes. Time by Mr. Kendall's Watch.			Zen ith Distance.	Time of ap- parent Noon by the Watch.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	H " "	" "			
☉ May 23	57 48½ 2 54	10 1 58 7 11	6 14 11 30	} 69 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
☾ — 24.	30 0½ 35 5	14 25 44 : 30 56	— —			} 69 0 0
☿ — 29.	8 04 13 35½	10 12 37¼ 18 9½	17 10½ 22 52	} 69 0 0		
☊ — 30.	22 27 27 55½	14 17 48½ 23 26	13 8½ 18 53			} 69 0 0

Observations at Queen Charlotte's Sound, in New Zealand, Continued.

1773.	Equal Altitudes. Time by Mr. Kendall's Watch.			Zenith Distance.	Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	H " "	" "	" "	H " "	
8 June 2.	10 52 $\frac{3}{4}$	10 15 23 $\frac{3}{4}$	20 02	69 20 0		☉'s U. L. } Easterly. ☉'s L. L. }
16 22 $\frac{1}{4}$		21 6	25 55 $\frac{1}{4}$			
24 — 3.					12 19 20,71	
	22 6 $\frac{3}{4}$	14		69 20 0		☉'s L. L. } Westerly. ☉'s U. L. }
	27 37	14 23 06	18 27:			

* * It appears, from the above Observations, that Mr. Kendall's Watch was gaining now at the rate of 9",05 a day on mean time; and by comparing it with Mr. Arnold's, (No. 3.) the latter appears to have lost, while here, at the rate of 1' 34",158.

Observations for the Variation of the
Compass.

1773.	Zenith Distance of the ☉'s L. L.	Azimuth of the ☉'s center.	Variation East.
	" "	" "	" "
8 May 21.	71 49 0	N. 24 45 E.	14 14
	71 26 45	24 15	14 02 $\frac{3}{4}$
	71 9 30	23 40	14 05 $\frac{3}{4}$
	70 52 15	23 05	14 08
	70 36 45	22 15	14 29
	70 16 15	21 35	14 28
	Mean of all is		14 14 35

Observations for the Dip of the Needle.

1773.	Face of the Instru- ment.		
	East.	West.	
	" "	" "	
8 May 21.	65 10	65 5	Means.
	65 20	65 15	
	65 0	64 50	
	65 10	65 03 $\frac{1}{3}$	
	Changed the Poles.		
24 June 3.	64 0	64 05	Means.
	64 15	64 30	
	63 55	64 25	
	64 0	64 20	
	64 02 $\frac{1}{2}$	64 20	Means.
So. End.	64 39	Mean of all.	

I made the preceding Observations on the open beach, at a place which bears S. 84° 10' W. by compass, from Mr. Bayley's Observatory: Sound passed from one place to the other exactly in 10"; perhaps $\frac{1}{4}$ th of a second may be added, on account of the time lost in letting go the Watch. Two guns were fired at each place, and the times noted at the other, between seeing the explosion and hearing the report, none of which differed sensibly from another. These experiments were made on a very calm evening, a little after sun-setting; the Barometer standing at 30,32, and the Thermometer at 52°.

Observations made at Point Venus, in Otaheite.

1773.	Equal Altitudes. Times by Clock B.			Zenith Distance.	Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
		H			H	
u Aug. 26.	20 13 $\frac{1}{4}$	6 20 10 $\frac{1}{2}$	24 6 $\frac{1}{2}$	65 20 0		☉'s U. L. } Easterly. ☉'s L. L. }
	22 37	24 34	26 29 $\frac{3}{4}$			
q — 27.					10 23 33,21	
	24 42 $\frac{3}{4}$	14 22 44 $\frac{1}{4}$	21 48 $\frac{1}{4}$	65 20 0		☉'s L. L. } Westerly. ☉'s U. L. }
	27 07 $\frac{3}{4}$	25 09 $\frac{1}{2}$	23 13			
	50 47 $\frac{1}{4}$	5 52 42	54 40 $\frac{1}{4}$	72 20 0		☉'s U. L. } Easterly. W. B. ☉'s L. L. }
	53 7 $\frac{1}{2}$	55 6 $\frac{1}{2}$	57 0 $\frac{1}{2}$			
h — 28.					10 25 45,41	
	58 35 $\frac{1}{2}$	14 56 39 $\frac{1}{4}$	54 44 $\frac{1}{2}$	72 20 0		☉'s L. L. } Westerly. W. B. ☉'s U. L. }
	0 55 $\frac{1}{4}$	58 59 $\frac{1}{4}$	57 5 $\frac{1}{2}$			
o — 29.	39 17	6 41 15	43 11	62 5 0		☉'s U. L. } Easterly. W. B. ☉'s L. L. }
	41 42	43 39 $\frac{1}{2}$	45 38			
D — 30.					10 30 05 $\frac{1}{3}$	
	18 43	14		62 5 0		☉'s L. L. } Westerly. W. B. ☉'s U. L. }
	21 6 $\frac{1}{2}$	14 19 8 $\frac{1}{2}$	17 12:			
	4 19 $\frac{1}{4}$	6		70 20 0		☉'s U. L. } ☉'s L. L. } Easterly.
		6 8 34	10 28 $\frac{1}{4}$			
	13 6 $\frac{1}{4}$	6 15 01	16 55	68 20 0		☉'s U. L. } ☉'s L. L. } Easterly.
	15 27	17 22 $\frac{1}{2}$	19 16 $\frac{3}{4}$			
	11 20 $\frac{1}{2}$	7 13 21 $\frac{3}{4}$	15 21	55 20 0		☉'s U. L. } ☉'s L. L. }
	13 49					
					10 32 14,51	
8 — 31.	50 54	13		55 20 0		☉'s L. L. } ☉'s U. L. } Westerly.
	53 24	13 51 22 $\frac{1}{2}$	49 22			
	49 14 $\frac{1}{2}$	14 47 19 $\frac{1}{2}$	45 25	68 20 0		☉'s L. L. } ☉'s U. L. } Westerly.
		49 40 $\frac{1}{2}$	47 46 $\frac{1}{4}$			
		14 56 6	54 11	70 20 0		☉'s L. L. } ☉'s U. L. }
	0 22					

Observations on Point Venus, in Otaheite, Continued.

1773.	Comparisons of the two Clocks with each other.					
	Clock B.			Clock C.		
u Aug. 26.	6	38	0	6	37	56
♀ — 27.	11	10	11 $\frac{3}{4}$	11	10	0
	14	28	17 $\frac{1}{4}$	14	28	0
	5	58	45	5	58	0
h — 28.	10	43	53 $\frac{1}{4}$	10	43	0
	15	2	0 $\frac{3}{4}$	15	1	0
	6	15	27 $\frac{1}{2}$	6	14	0
o — 29.	10	57	36 $\frac{1}{2}$	10	56	0
	6	31	10 $\frac{3}{4}$	6	29	0
D — 30.	10	59	19	10	57	0
	14	22	24 $\frac{3}{4}$	14	20	0
	6	31	53	6	29	0
δ — 31.	10	44	0 $\frac{1}{4}$	10	41	0
	15	12	8 $\frac{1}{4}$	15	9	0

Computations of the going of the two Clocks.

1773.	Time of ap- parent Noon by Clock B.	Syderial Time of ap- parent Noon.	Clock fast or slow of Syderial Time.	Clock B. loses on Sy- derial Time.	Time by B. of comparing the Clocks.	Time by C. of com- paring the Clocks.	Time past Noon by B. when com- pared.	B. before C. at Noon.	B. gains on C. each Day.	C. loses on Sy- derial Time.
	H "	H "	" "	" "	H "	H "	" "	" "	" "	" "
♀ Aug. 27.	10 23 33,21	10 23 01,5	+0 31,71	1 27,20	11 10 11,75	11 10 00	46 38,54	0 10,38	0 42,34	2 9,54
h — 28.	25 45,41	26 40,9	-0 55,49	1 28,91	10 43 53,25	10 43 00	18 7,84	0 52,72	0 42,70	2 11,61
D — 30.	30 05,33	33 58,65	-3 53,32	1 29,15	10 59 19,00	10 57 00	29 13,67	2 18,13	0 41,78	2 10,93
δ — 31.	32 14,51	37 36,98	-5 22,47		10 44 00,25	10 41 00	11 45,74	2 59,91		
			Mean	1 28,42					Mean	2 10,69

The clocks were fixed up, as usual, by means of the iron block and frame; and stood both in one tent: The pendulums of the same length as at Greenwich; that of B. vibrated over an arch of $1^{\circ} 37\frac{1}{2}$ each way from the perpendicular for the first two or three days, and afterwards over an arch of $1^{\circ} 40'$. C. varied its vibrations from $1^{\circ} 45'$ on each side to $1^{\circ} 48'$, and back again to $1^{\circ} 45'$. The times of equal altitudes were always noted by B, and C compared with it in the same manner as the watches were.

Observations on Point Venus, in Otaheite, Continued.

Computations of the going of Mr. Kendall's Watch.

1773.	Time of ap- parent Noon by Clock B.	Time by Clock of comparing the Watch.	Time past Noon by the Clock.	Clock's gain on the Watch.	Time past Noon by the Watch.	Time by the Watch when com- pared.	Time of ap- parent Noon by the Watch.	Mean Time of apparent Noon.	Watch too slow for mean Time.	Watch gains on mean Time.
	H "	H "	" "	" "	H "	H "	H "	H "	H "	" "
♀ Aug. 27.	10 23 33,21	10 49 41,25	26 08,04	2,54	0 26 05,50	10 37 0	10 10 54,50	0 1 16,9	13 50 22,40	9,18
h — 28.	25 45,41	11 6 2,75	40 17,34	3,92	0 40 13,42	10 51 0	10 10 46,58	0 0 59,8	13 50 13,22	8,33
D — 30.	30 05,33	10 41 38,50	11 33,17	1,10	0 11 32,07	10 22 0	10 10 27,93	0 0 24,5	13 49 56,57	9,08
♂ — 31.	32 14,51	11 2 58,75	30 44,44	2,95	0 30 41,29	10 41 0	10 10 18,71	0 0 06,2	13 49 47,49	
Mean										18,863

Computations of the going of Mr. Arnold's Watch, (No. 1.) W. B.

1773.	Time of the Com- parison by Watch.	Time of the Comparison by Clock.	Clock before the Watch.	Clock gains on the Watch between Compara- sons.	Interval between the Com- parisons.	Watch loses on the Clock each Day.	Clock loses on Syde- rial Time.	Watch loses on Syderial Time.	Watch loses on mean Time.
	H "	H "	H "	" "	" "	H "	" "	" "	" "
♀ Aug. 27.	7 51 0	11 2 6 $\frac{1}{4}$	3 11 6 $\frac{1}{4}$	3 16 $\frac{3}{4}$	23 32	3 20,7	1 27,20	4 47,90	0 51,40
h — 28.	7 23 0	10 37 23	3 14 23	3 33	26 34	3 12,1	1 28,91	4 41,01	0 44,51
☉ — 29.	9 57 0	13 14 56	3 17 56	2 53 $\frac{1}{2}$	21 29	3 13,6	1 28,91	4 42,51	0 46,01
D — 30.	7 26 0	10 46 49 $\frac{1}{2}$	3 20 49 $\frac{1}{2}$	3 28	26 20	3 9,4	1 29,15	4 38,55	0 42,05
♂ — 31.	9 46 0	13 10 17 $\frac{1}{2}$	3 24 17 $\frac{1}{2}$						0 45,993

Observed Zenith Distances of the Sun and Stars for finding the Latitude.

1773.	Zenith Distances.							Barometer.	Thermometers.		Phenomena and Remarks.
	Interior Arch.			Exterior Arch.					In Tent.	Out.	
	°	'	"	G.	S.	V.	+ "				
☉ Aug. 29.	26	36	22	28	1	17	8	30,20	82½	90	☉'s U. L. on the meridian.
☽ — 30.	56	2	46	59	3	5	22	30,15	71	70	α Lyrae } on the meri-
	39	56	25	42	2	14	12	30,15	70½	69	α Pavonis } dian.
♂ — 31.	26	25	42	28	0	25	10	30,16	84¾	93	☉'s L. L. on the meridian.
	30	13	47	32	1	0	6	30,09	75½	75½	α Ophiuchi } on the meri-
	56	3	40	59	3	7	10	30,08	75½	73½	α Lyrae } dian.
	39	56	22	42	2	13	26	30,09	73½	71½	α Pavonis }

Observations on Point Venus, in Otaheite, Continued.

In order to determine the error of the line of collimation of the quadrant, I made two holes in a board at a distance from each other, exactly equal to the difference of the two heights of the telescope, when set to the 90th division in a proper position for observing, and when turned upside down; and set this board up about $\frac{1}{4}$ of a mile from the observatory, so that the middle vertical wire would bisect both holes at once. I then took the following zenith distances, inverting the quadrant between every three observations.

Zenith Distance of the upper hole. Quadrant in a proper position for Observation.				Zenith Distance, lower hole. Quadrant inverted.			
Interior Arch.		Exterior Arch.		Interior Arch.		Exterior Arch.	
°	'	G.	S. V. " +	°	'	G.	S. V. " +
89	54	0		90	7	5	
	53	54				3	
	53	52				7	
	53	58			10	96	0 18
	53	48			10		18
	53	58			7		18
	53	54	95 3 17		5		0
	53	48	17		7		
	53	56	17	90	7	6 $\frac{3}{4}$	96 0 18
	53	54	16	89	53	53,8	95 3 17
	53	50	17	00	1	00,6	00 0 3
	53	54	17	00	00	30,3	00 0 1
89	53	55,8	95 3 17				15,1

Mean of the lower hole.
Ditto of the upper hole.
Excess above 180°.
Errors of the line of collimation to be subtracted.

Computations of the Latitude of Point Venus.

1773.				1773.			
Latitudes by		Declination.		Latitude by		Declination.	
Interior Arch.	Exterior Arch.			Interior Arch.	Exterior Arch.		
By Observations of the Sun.				By Observations of α Pavonis.			
☉ Aug. 29.	17 28 13	17 28 19 $\frac{1}{2}$	9 23 59 $\frac{1}{2}$ N.	☉ Aug. 30.	17 29 44	17 29 22	
☿ — 31.	17 28 46	17 29 0 $\frac{1}{2}$	8 40 58		17 29 47 $\frac{1}{2}$	17 29 34 $\frac{1}{2}$	
	17 28 29 $\frac{1}{2}$	17 28 40	Means.		17 29 45 $\frac{3}{4}$	17 29 28 $\frac{1}{2}$	Means.
	By Observations of α Lyrae.				17 28 42 $\frac{1}{2}$	17 28 58 $\frac{1}{2}$	Mean of the three northern stars
☽ — 30.	17 28 12	17 28 44 $\frac{1}{2}$			17 29 14 $\frac{1}{2}$	17 29 13 $\frac{1}{2}$	Mean of both.
☿ — 31.	17 29 4	17 20 23 $\frac{1}{2}$	38 35 27 N.		17 29 13,7		Latitude South.
	17 28 38	17 29 04	Means.				
	By an Observation of α Ophiuchi.						
☿ — 31.	17 29 0	17 29 11	12 44 48 N.				

Observations on Point Venus, in Otaheite, Continued.

Observations for the Longitude of the Place.

1773.	Time by the Clock B.	Altitude of the $\odot$'s L. L.	Zenith Distance of the $\odot$'s U. L.	Distance of the $\odot$ and $\odot$'s Limbs.	
	H	° ' "	° ' "	° ' "	
♀ Aug. 27.	14 41 14	20 33	47 52	116 12 0	Longitude $210^{\circ} 45' \frac{1}{2}$ East.
	14 43 21	20 4	47 23	12 0	
	14 45 45	19 31	46 $48 \frac{1}{2}$	12 45	
	14 47 6	19 14	46 $31 \frac{1}{4}$	13 0	
	14 48 12	18 59	46 19	13 0	
	14 49 13	18 45	46 $04 \frac{1}{2}$	13 0	
	Errors of the Quad. }	+ $1 \frac{1}{2}$	- $0 \frac{1}{2}$	+ 1 0	Longitude $210^{\circ} 33'$ East. W. B.
	14 54 04	17 36	44 $55 \frac{3}{4}$	116 20 30	
	14 56 04	17 11	44 $28 \frac{1}{4}$	21 10	
	14 57 09	16 57	44 $13 \frac{3}{4}$	21 30	
	14 58 38	16 38	43 53	22 5	
	14 59 54	16 18	43 $35 \frac{1}{4}$	22 20	
	15 01 03	16 04	43 20	22 45	
	Errors of the Quad. }	+ $1 \frac{1}{2}$	- $0 \frac{1}{2}$	- 3 42	

* * The Moon's zenith distance was observed with the Astronomical Quadrant; the Sun's altitude with an Hadley's Sextant: Height of the eye above the sea, 13 or 14 feet.

1773.

- ♂ Aug. 29. At 18 h. 41' 05" by the Clock, or 8 h. 16' 46",¹ apparent time, the small star which precedes β Capricorni disappeared; the brightness of the Moon rendered the Star so faint that I was not absolutely certain it then immersed behind the Moon's Limb.
- At 18 h. 50' 50", or 8 h. 26' 30"² apparent time, β Capricorni immersed behind the Moon's dark Limb; an exceeding good Observation.
- At 20 h. 25' 32", or 10 h. 1' 3"³ apparent time, β Capricorni emerged: very good also. W. B.

Observations on Point Venus, in Otaheite, Continued.

Observations for the Variation of the Compass.

1773.	Zenith Distance ☉'s U. L.	Azimuth of the ☉'s center.	Vari- ation East.
h Aug. 28.	78 43 $\frac{3}{4}$	N. 71 0 E.	5 28 $\frac{5}{8}$
	78 22 $\frac{3}{4}$	70 50	
	77 50	70 35	
	77 32 $\frac{3}{4}$	70 10	
	77 15 $\frac{1}{2}$	70 05	
☉ — 29.	71 41	N. 67 40 E.	6 09 $\frac{1}{4}$
	71 0	67 25	
	70 12	66 35	
	69 33 $\frac{1}{2}$	68 0	
	69 01 $\frac{1}{2}$	66 15	
	68 28 $\frac{1}{2}$	66 20	5 42 $\frac{3}{4}$
☽ — 30.	74 13 L. L.	N. 69 55 E.	
	73 45 $\frac{3}{4}$	69 35	
	73 17 $\frac{1}{2}$	69 05	
	72 47	68 50	
	72 27 $\frac{3}{4}$	69 0	
	Altitude ☉'s L. L.		
☽ — 31.	4 57	N. 84 30 W.	5 41 $\frac{1}{2}$
	4 43	84 10	
	4 21	84 50	
	3 53	84 47	
	3 23	85 0	
	Zenith Dis- tance ☉'s L. L.		
	78 58 $\frac{1}{2}$	N. 71 50 E.	5 44 $\frac{11}{12}$
	78 27 $\frac{1}{2}$	71 25	
	78 0 $\frac{1}{2}$	71 40	
	77 33 $\frac{1}{4}$	N. 71 25 E.	5 48 $\frac{1}{3}$
	77 14 $\frac{1}{2}$	71 5	
	76 50 $\frac{1}{4}$	70 50	
The mean is			5 39 $\frac{1}{2}$

Observations for the Dip of the Needle,
made by Mr. Bayley.

1773.	Face of the In- strument.	
	East.	West.
☽ Aug. 31.	28 30	29 15
	28 27	28 45
	28 14	28 47
	28 20	29 0
	28 37	28 50
	28 15	28 37
	28 35	29 0
	29 05	29 35
	29 02	28 52
	28 45	29 0
	28 50	29 0
	29 0	29 27
	28 38 $\frac{1}{2}$	29 0 $\frac{1}{2}$ Means.
	Changed the Poles.	
	30 15	29 50
	30 21	30 21
	30 02	30 48
	31 0	30 29
	30 56	30 56
	30 50	31 0
	31 0	31 10
	30 50	30 56
	30 0	30 30
	31 0	30 15
	30 15	30 25
	31 0	30 30
	30 37 $\frac{1}{2}$	30 35 $\frac{1}{2}$ Means.
	28 38 $\frac{1}{2}$	29 0 $\frac{1}{2}$ { Means bef. chang- ing the poles.
	29 38''	29 48 $\frac{1}{4}$ Means of both.
	29 43 $\frac{1}{2}$	Dip of the Needle's S. End.

Observations on Point Venus, in Otaheite, Continued.

Observations on the Tides, by Mr. Bayley.

1773.					1773.				
	Times by Clock B.		Apparent Time.		Remarks.		Times by Clock B.		Remarks.
	H	M	F.	I.			H	M	
h Aug. 28.	8	29	3	3 $\frac{1}{2}$	High Water in the Morn.	♂ Aug. 31.	11	0	3 6 $\frac{1}{2}$
	8	37	3	4 $\frac{1}{4}$			11	30	3 5 $\frac{1}{2}$
	8	40	3	4 $\frac{3}{4}$			11	40	3 5 $\frac{1}{4}$
	9	07	3	4 $\frac{3}{4}$			11	50	3 4 $\frac{3}{4}$
	9	18	3	4 $\frac{1}{2}$			16	12	2 5 $\frac{1}{2}$
	9	57	3	3 $\frac{3}{4}$			16	22	2 5 $\frac{3}{8}$
	10	06	3	3 $\frac{3}{8}$			16	32	2 5 $\frac{1}{2}$
	10	27	3	3 $\frac{1}{4}$			16	45	2 5 $\frac{3}{4}$
o — 29.	15	32	2	3 $\frac{1}{4}$			16	49	2 5 $\frac{1}{4}$
	15	35	2	3 $\frac{3}{4}$			17	0	2 4 $\frac{7}{8}$
	15	40	2	3	Low Water in the Even.		17	18	2 5
	15	48	2	3 $\frac{1}{4}$			17	28	2 5 $\frac{1}{8}$
	16	10	2	2 $\frac{3}{4}$			17	35	2 5 $\frac{1}{2}$
	16	12	2	2 $\frac{1}{4}$		The following Observations, taken by myself, may contribute towards ascertaining the times of high water.			
	16	24	2	2 $\frac{1}{2}$					
	16	30	2	2 $\frac{3}{4}$		1773.	Times by Clock B.	Apparent Time.	Height of the Water.
	16	35	2	3			H	M	F. I.
	4	30	2	5		h Aug. 28.			
	5	05	2	4	Low Water in the Morn.		6	48	0
	5	18	2	4 $\frac{1}{2}$			7	17	0
	5	27	2	5			7	56	0
	10	5	3	5 $\frac{1}{2}$			9	0	48
	10	9	3	6 $\frac{1}{4}$		o — 29.	10	2	30
	10	18	3	6 $\frac{1}{2}$			10	57	10
	10	22	3	6			11	34	6
d — 30.	10	33	3	6 $\frac{1}{4}$					
	10	36	3	5 $\frac{1}{2}$			6	51	30
	10	45	3	5			7	30	50
	10	49	3	5 $\frac{1}{2}$	High Water.		8	11	0
	11	0	3	5		d — 30.	10	21	49
	4	40	2	3 $\frac{3}{4}$			12	21	0
	4	50	2	3 $\frac{1}{2}$			13	10	48
	5	0	2	3 $\frac{1}{2}$			14	7	45
	5	10	2	3 $\frac{1}{2}$					
	5	25	2	4 $\frac{1}{4}$					
	5	39	2	4 $\frac{3}{4}$					
	9	44	3	5 $\frac{1}{2}$					
	9	50	3	6 $\frac{1}{4}$					
	9	56	3	5	Low Water in the Morn.				
	10	08	3	6 $\frac{1}{4}$					
	10	20	3	6 $\frac{1}{2}$					
♂ — 31.	10	40	3	6 $\frac{3}{4}$					

The above Observations of Mr. Bayley's, were made in the same manner, and by the same means, as those at Queen Charlotte's Sound; and those which I took, were made in the same manner as those at Dusky Bay, in New Zealand: I should have continued these Observations longer, if the Natives had not taken away my tube.

Observations at Queen Charlotte's Sound, in New Zealand.

1773.	Equal Altitudes. Times by Clock B.			Zenith Distance.	Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	H " "	" "		H " "	
♀ Nov. 5	24 39	10 27 01½	29 21½	60 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
h — 6.	27 36¼	29 56½	32 15¾			
	2 16¾	18 59 56¼	57 36½	60 0 0	14 44 46,06	☉'s L. L. } Westerly. ☉'s U. L. }
		19 2 52	0 33½			
D — 8.	55 29¾	9 57 47½	0 08½	67 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
	58 05	10 0 45	3 04¾			
	55 56	10 58 16¾	0 37	55 40 0		☉'s U. L. } Easterly. ☉'s L. L. }
	58 51½	11 1 12½	3 34			
♂ — 9.				55 40 0	14 55 46½	☉'s L. L. } Westerly. ☉'s U. L. }
	52 58¾	18 50 37½	48 18¼			
	55 56:	53 34¾	51 14½	67 0 0		☉'s L. L. } Easterly. ☉'s U. L. }
	53 30:	19 51 10½	48 52			
	56 26	54 6	51 47½	43 20 0		☉'s U. L. } Easterly. ☉'s L. L. }
	6 9	12 8 39½				
	9 16:	11 45	14 12	43 20 0	14 59 28,63	☉'s L. L. } Westerly. ☉'s U. L. }
♀ — 10.	49 55:	17 47 26	45 01			
	53 04½	50 34		65 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
♂ — 11.	14 31¼	10 16 52½	19 12			
	17 37¾	19 48	22 6¼	54 40 0		☉'s U. L. } Easterly. ☉'s L. L. }
	9 39¾	11	14 21			
	12 36:	11 14 56½	17 17	54 40 0	15 6 54,51	☉'s L. L. } Westerly. ☉'s U. L. }
♀ — 12.	1 30½	18	56 49			
	4 28	19 2 7	59 47	65 0 0		☉'s L. L. } Easterly. ☉'s U. L. }
	56 40½	19 54 21	52 02			
	59 37	19 57 19	54 58	66 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
	12 7	10 14 26	16 44½			
	15 1	17 21	19 39	57 40 0		☉'s U. L. } Easterly. ☉'s L. L. }
	56 29	10 58 48½	1 7			
	59 23½	11 1 42½	4 3	57 40 0	15 10 38,71	☉'s L. L. } Westerly. ☉'s U. L. }
h — 13.	22 12½	19	20 27½			
	25 5	19 22 45	2 1	66 0 0		☉'s L. L. } Easterly. ☉'s U. L. }
	6 39	20 4 19	4 55½			
	9 35	7 13½		64 40 0		☉'s U. L. } Easterly. ☉'s L. L. }
	22 2¼	10 24 23¾	29 37			
	24 58¼	27 18½	44 28	61 20 0		☉'s U. L. } Easterly. ☉'s L. L. }
	39 49½	10 42 9	47 24			
	42 45	45 5		15 14 22,33		
☉ — 14.						

Observations at Queen Charlotte's Sound, in New Zealand, Continued.

1773.	Equal Altitudes. Times by Clock B.			Zenith Distance.	Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
		H		o	H	
☉ Nov. 14.		19 43 58 $\frac{1}{4}$	41 40 $\frac{1}{2}$	61 20 0		☉'s L. L. ☉'s U. L. } Westerly.
	49 14 $\frac{1}{2}$	46 53	44 36 $\frac{1}{2}$			
	4 7	20 1 45 $\frac{1}{2}$	59 28	64 40 0		☉'s L. L. ☉'s U. L. } Westerly.
	7 1 $\frac{3}{4}$	4 43	2 24			
	7 9	10 9 29 $\frac{1}{2}$	11 49 $\frac{1}{2}$	68 0 0		☉'s U. L. ☉'s L. L. } Easterly.
	10 6 $\frac{1}{2}$	12 26	14 45 $\frac{1}{2}$			
	23 14	10 25 32 $\frac{1}{2}$	27 50 $\frac{1}{2}$	65 0 0		☉'s U. L. ☉'s L. L. } Easterly.
		28 27 $\frac{1}{2}$	30 47 $\frac{1}{2}$			
☽ — 15.					15 18 08 $\frac{3}{4}$	
	10 29 $\frac{1}{2}$	20 08 09 $\frac{1}{2}$		65 0 0		☉'s L. L. ☉'s U. L. } Westerly.
	13 25	11 5	8 46 $\frac{1}{2}$			
	26 32 $\frac{1}{2}$	20 24 13		68 0 0		☉'s L. L. ☉'s U. L. } Westerly.
	29 30	27 9	24 49			
	47 27	10 49 48 $\frac{1}{2}$		61 0 0		☉'s U. L. ☉'s L. L. } Easterly.
	50 24	52 44	55 2 $\frac{1}{2}$			
♂ — 16.					15 21 54 $\frac{1}{2}$	
	53 42	19 51 24	49 5	61 0 0		☉'s L. L. ☉'s U. L. } Westerly.
	56 39	54 18 $\frac{1}{2}$	52 0 $\frac{1}{2}$			
♀ — 17.	57 02	10 59 23	1 41 $\frac{1}{2}$	60 20 0		☉'s U. L. ☉'s L. L. } Easterly.
	59 58	11 2 18	4 37 $\frac{1}{2}$			
♂ — 18.					15 29 31,52	
	59 20 $\frac{1}{2}$	19 57 01 $\frac{1}{2}$	54 41	60 20 0		☉'s L. L. ☉'s U. L. } Westerly.
	2 13	59 57 $\frac{1}{2}$	57 39			
♀ — 19.		13 10 47		37 20 30		☉'s U. L. ☉'s L. L. } Easterly.
	11 24:		16 27 $\frac{1}{2}$			
♂ — 20.					15 37 10,47	
	3 9	18		37 20 30		☉'s L. L. ☉'s U. L. } Westerly.
		18 3 43 $\frac{1}{2}$				
☉ — 21.	38 53	12 41 15 $\frac{1}{2}$	43 39	43 40 0		☉'s U. L. ☉'s L. L. } Easterly.
	41 52	44 16	46 40 $\frac{1}{2}$			
☽ — 22.					15 44 51,38	
	48 01	18 45 37	43 12 $\frac{1}{2}$	43 40 0		☉'s L. L. ☉'s U. L. } Westerly.
	51 01	48 38	46 14 $\frac{1}{2}$			

Observations at Queen Charlotte's Sound, in New Zealand, Continued.

Observed Zenith Distances of the Sun and fixed Stars.

1773.	Zenith Distances.				Barom.	Thermom.		
	Interior Arch.	Exterior Arch.				In Tent.	Out.	
	° ' "	° ' "	+					
♂ Nov. 9.	10 16 50	10 3 27	23	}	30,07	50	47	Fomalhaut on the Meridian.
	55 4 25	58 3 0	7		}			
☉ — 14.	22 32 25	24 0 5	20			30,33	72 $\frac{1}{4}$	70
☾ — 15.	22 49 32	24 1 13	3	}	30,17	71	67	☉'s L. L. Ditto.
	22 16 59	23 3 3	0		}			
	17 17 18	18 1 25	0			30,12	51 $\frac{1}{2}$	50
♂ — 16.	68 53 56	73 1 31	15		30,0	57	54 $\frac{3}{4}$	α Andromeda, Ditto.
	17 16 50	18 1 24	23		29,99	54 $\frac{3}{4}$	55	Achernar, Ditto.
♂ — 17.	21 46 37	23 0 29	20	}	29,99	71	76	☉'s U. L. Ditto.
	22 19 15	23 3 8	0		}			
☾ — 18.	22 5 7	23 2 8	0			29,70	71 $\frac{1}{4}$	73 $\frac{3}{4}$
♂ — 20.	68 53 55	73 1 31	20		29,64	50 $\frac{1}{4}$	47 $\frac{1}{4}$	α Andromeda, Ditto.
	17 17 33	18 1 26	13		29,65	48 $\frac{1}{2}$	46 $\frac{1}{2}$	Achernar, Ditto.

The following Observations, for finding the Error of the Line of Collimation of the Quadrant, were made in the same manner, and by the same means, as those at Point Venus, in Otaheite: The position of the Quadrant was changed after every six Observations.

	Zenith Distance of the upper hole: the Quadrant direct.				Zenith Distance of the lower hole: the Quadrant inverted.				
	Interior Arch.		Exterior Arch.		Interior Arch.		Exterior Arch.		
	°	'	"	G. S. V. + "	°	'	"	G. S. V. + "	
	89	46	15	95 3 1 7	90	14	10	96 1 1 0	
			20	7			0	0 19	
			22	10			0	0 20	
			18	7			15	1 7	
			20	6			15	1 9	
			22	13			5	1 5	
	89	46	27	95 3 1 20	90	13	55	96 1 1 0	
			27	20			14 0	1 0	
			25	13			13 55	0 22	
			27	18			13 52	0 15	
			21	9			13 52	0 20	
			21	13			14 0	0 22	
Mean of the upper - - -	89	46	22,1	95 3 1 12	90	14	01,6	96 1 0 24,8	Means.
Ditto of the lower - - -	90	14	01,6	96 1 0 24,8					
Excess above 180°. - - -			23,7	2 10,4					
Error of the Line of Collimation.			11,85	— 1 5,2	To be subtracted.				

Observations at Queen Charlotte's Sound, in New Zealand, Continued.

Computations of the Latitude of the Place, from the preceding Observations.

1773.	Latitude.			1773.	Latitude.		
	Interior Arch.	Exterior Arch.	Declination.		Interior Arch.	Exterior Arch.	Declination.
	° ' "	° ' "	° ' "		° ' "	° ' "	° ' "
By Observations of the Sun.				By an Observation of Fomalhaut.			
☉ Nov. 14	41 5 55 $\frac{1}{3}$	41 5 42	18 17 04 $\frac{1}{2}$ N.	♂ Nov. 9.	41 5 42 $\frac{3}{4}$	41 5 27 $\frac{1}{2}$	30 48 53 $\frac{1}{2}$ N.
☽ — 15.	41 6 0	41 5 57	18 32 33	By an Observation of α Pegasi.			
♂ — 17.	41 5 37	41 5 29 $\frac{1}{3}$	19 2 30 $\frac{1}{2}$		41 5 48 $\frac{1}{2}$	41 5 51 $\frac{1}{2}$	
☽ — 18.	41 6 1 $\frac{1}{2}$	41 5 58	19 16 59	The preceding Stars all passed N. of the Zenith.			
	41 5 53 $\frac{1}{2}$	41 5 46 $\frac{1}{2}$	Means.	The following of Achernar, were S. of the Zenith.			
By Observations of α Andromeda.				☽ Nov. 15.	41 6 25	41 6 30	
♂ Nov. 16.	41 5 30 $\frac{1}{2}$	41 5 25 $\frac{1}{4}$	27 50 39 N.		41 6 53	41 6 33 $\frac{3}{4}$	
☽ — 20.	41 5 31 $\frac{3}{4}$	41 5 32 $\frac{1}{2}$			41 6 9 $\frac{1}{2}$	41 5 50 $\frac{1}{2}$	
	41 5 31	41 5 29	Means.		41 6 29	41 6 18	Mean by Achernar.
					41 5 44	41 5 38 $\frac{1}{2}$	Mean of N. Stars.
					41 6 6 $\frac{1}{2}$	41 5 58 $\frac{1}{4}$	Mean of both.
				And 41 6 2 $\frac{1}{2}$ is the Latitude South.			

Observations for the Longitude of the Place.

1773.	Time by the Clock.	Apparent Time.	Zenith Distance D's U. L.	Distance ☉ and D's nearest Limbs.	Longitude East.	Remarks, &c.
	H ' "	H ' "	° ' "	° ' "	° ' "	
☽ Nov. 6.	9 27 28	18 44 33.4	58 24	99 28	174 2 51	{ Observed with a Quadrant of Mr. Dollond's making, and 1' 16" must be subtracted from the distance for its error.
	29 36		32	28		
	31 8		37	27		
	33 13		44 $\frac{1}{3}$	27		
	35 5		51 $\frac{3}{4}$	26 $\frac{1}{4}$		
	36 33	18 58 32	56 $\frac{3}{4}$	25 $\frac{1}{2}$	174 54 45	{ Observed with a Quadrant of Mr. Ramsden's making, and 2' 00" must be added to the distance for its error.
	9 42 22		59 19 $\frac{1}{3}$	99 22		
	43 43		24 $\frac{3}{4}$	22		
	45 19		31	21 $\frac{3}{4}$		
	47 0		38	21		
	48 28		44 $\frac{3}{4}$	20 $\frac{1}{4}$		
	50 16		53 $\frac{1}{2}$	19 $\frac{1}{2}$		

Observations at Queen Charlotte's Sound, in New Zealand, Continued.

Observations for the Longitude of the Place.

1773.	Time by the Clock.		Apparent Time.	Zenith Distance D's U. L.	Distance ☉ and D's nearest Limbs.	Longitude East.	Remarks, &c.
	H	"	H	"	"	"	
D Nov. 8.	10	12 30	19 22 52	50 21 $\frac{1}{2}$	75 33 $\frac{1}{4}$	174 20 45	{ Distance observed by Mr. Ramsden's Quadrant: Error 2' 05"; to be added.
		14 49		22 $\frac{1}{2}$	32 $\frac{3}{4}$		
		16 23		23	33		
		19 52		25	31 $\frac{3}{4}$		
		21 13		26	31		
		22 47		27 $\frac{1}{2}$	30 $\frac{1}{2}$		
	10	40 59 $\frac{1}{2}$	19 49 14	50 53	75 27	173 55 37 $\frac{1}{2}$	{ The distances were observed with Mr. Dollond's Quadrant, and 1' 17" must be subtracted for its error.
		42 20		55 $\frac{3}{4}$	26 $\frac{1}{4}$		
		44 04		58 $\frac{1}{2}$	26		
		45 09		51 01	25 $\frac{1}{2}$		
		46 16		04	25 $\frac{1}{4}$		
		47 24		06 $\frac{1}{2}$	24 $\frac{3}{4}$		
u — 18.	18	43 49	3 17 17,8	24 15	51 4	174 41 0	{ Distances with Dollond's Quadrant, and 1' 9" must be subtracted for its error.
		45 32		11 $\frac{1}{2}$	4 $\frac{1}{4}$		
		47 04		7	5		
		48 11		5 $\frac{1}{2}$	5 $\frac{3}{4}$		
		49 11		2 $\frac{3}{4}$	6		
		50 18		1	6 $\frac{1}{4}$		
	18	53 53	3 28 19	23 55	51 05 $\frac{1}{2}$	174 25 7	{ The distance was observed with Ramsden's Quadrant, and 2' 30" must be added for its error.
		56 46		51	06 $\frac{1}{4}$		
		58 02 $\frac{1}{2}$		49	6 $\frac{3}{4}$		
		59 19		47 $\frac{3}{4}$	7		
	19	0 34		46 $\frac{1}{2}$	7 $\frac{1}{2}$		
		01 48		46	7 $\frac{3}{4}$		
h — 20.	18	20 49	2 48 8,4	45 7 $\frac{1}{4}$	77 4 $\frac{3}{4}$	174 36 12	{ Distance by Dollond's Quadrant, and its error was 1' 00", to be subtracted.
		23 12		44 44 $\frac{1}{4}$	6		
		25 09		44 25	6 $\frac{1}{4}$		
		26 40		44 12 $\frac{1}{4}$	7		
		28 15		43 57 $\frac{1}{4}$	7 $\frac{3}{4}$		
		30 29		43 35 $\frac{1}{4}$	8 $\frac{1}{2}$		
	18	55 45	3 21 57,4	39 45	77 14 $\frac{1}{4}$	174 18 21	{ Distance by Ramsden's Quadrant; and its error was 2' 14", to be added.
		57 16		39 30 $\frac{1}{2}$	15		
		58 50		39 18 $\frac{3}{4}$	15 $\frac{1}{4}$		
	19	0 16		39 05 $\frac{1}{2}$	16		
		2 16		38 48 $\frac{3}{4}$	16 $\frac{3}{4}$		
		3 38		38 37 $\frac{1}{4}$	17 $\frac{1}{2}$		

Observations at Queen Charlotte's Sound, in New Zealand, Continued.

Observations for the Longitude of the Place.

1773.	Time by the Clock.	Apparent Time.	Zenith Distance D's L. L.	Distance α Arietis and D's farthest L.	Longitude East.	Remarks, &c.
	H ' "	H ' "	o ' "	o ' "	o ' "	
h Nov. 20.	I 32 50	10 4 01	63 55	75 34	174 42 26	Distance with Dollond's Quadrant, and its error was 1' 5" to be subtracted.
	35 18		64 22 $\frac{3}{4}$	33		
	38 20		64 55 $\frac{3}{4}$	33		
	40 4		65 15	31		
	41 36		65 31 $\frac{1}{2}$	30 $\frac{1}{4}$		
	43 23		65 51	28		
	45 19		66 11	28 $\frac{1}{4}$		
	48 45		66 49	28		
	50 25		67 8 $\frac{1}{3}$	27 $\frac{1}{2}$		
	51 57		67 25	27		

Observations of the Eclipses of Jupiter's Satellites.

o Nov 14.	At 23 h. 15' 56" by the clock, or 8 h. 0' 18 $\frac{1}{2}$ " apparent time, μ 's 1st satellite emerged.	174 19 45	{ Very clear: Magnifying power 150. A little hazy, Jupiter's belts just discernible: Magnifying power 90.
μ — 18.	At 23 h. 35' 47" by the clock, or 8 h. 4' 58" apparent time, μ 's 2d satellite emerged.		

Observations for the Variation of the Compass.

1773.	Zenith Distance of the $\odot$'s U. L.	Azimuth of the Sun's Center.	Variation East.	1773.	Zenith Distance of the $\odot$'s U. L.	Azimuth of the Sun's Center.	Variation East.
	o ' "	o ' "	o ' "		o ' "	o ' "	o ' "
D Nov. 8.	74 48 $\frac{3}{4}$	N. 85 25 E.	13 49 $\frac{1}{2}$	8 Nov. 12.	72 36 $\frac{2}{3}$	N. 85 10 E.	13 22 $\frac{5}{8}$
	74 28 $\frac{3}{4}$				72 22 $\frac{2}{3}$		
	74 12 $\frac{1}{2}$				72 2 $\frac{2}{3}$		
	73 54 $\frac{1}{3}$				71 43 $\frac{3}{4}$		
	73 26				71 32 $\frac{2}{3}$		
	73 11 $\frac{1}{2}$				71 20 $\frac{1}{4}$		
8 — 12.	66 23 $\frac{1}{4}$	S. 72 25 W.	14 6 $\frac{1}{8}$	h — 13.	67 21 $\frac{1}{3}$	S. 70 45 W.	14 10
	66 37 $\frac{1}{2}$				67 44		
	66 54 $\frac{3}{4}$				68 01 $\frac{1}{6}$		
	67 9 $\frac{1}{2}$				68 19 $\frac{1}{4}$		
	67 20 $\frac{3}{4}$				68 55 $\frac{2}{3}$		
	67 33 $\frac{1}{4}$				69 16 $\frac{1}{2}$		

Observations at Queen Charlotte's Sound, in New Zealand, Continued.

Observations for the Dip of the Needle.

1773.	Face of the Instrument.		
	East.	West.	
	65 0	64 20	
	64 20	64 30	
	63 45	63 50	
	63 05	64 25	
	63 40	64 30	
	63 58	64 19	Means.
	Changed the Poles.		
	64 15	64 0	
	65 20	64 05	
	65 25	64 10	
	64 15	64 05	
	65 40	64 20	
	64 59	64 08	Means.
	64 28½	64 13	Mean of the two means.
	64 20¾	Dip of the Needle's south end.	

Observations on the Tides.

1773.	Time by the Clock.	Appa- rent Time.	Height of the Water.	Remarks.	1773.	Time by the Clock.	Appa- rent Time.	Height of the Water.	Remarks.
	H ' "	H ' "	F. I.			H ' "	H ' "	F. I.	
Nov. 13	22 14		4 2	High Water.	Nov. 14.	14 10		3 9	Low Water.
	23 26	8 14,1	3 9½			14 22		4 3	
	0 38		4 2		— 15.	23 24		4 1	
	10 52		4 1½			23 59		3 8	
	11 4		3 10	High Water.		0 29		3 4	High Water.
	12 0	20 46,1	3 5½			1 2	9 45,4	3 2	
	12 55		3 10			1 38		3 4	
	13 9		4 1½			2 7		3 8	
— 14.			7 11	Low Water.		2 35		4 1	High Water.
			3 1½	High Water.		11 55		3 11	
	11 0		4 3			12 11		3 8	
	11 25		3 9			12 42		3 2	
	11 43		3 6			13 36½	22 14,7	2 8	
	12 45½	21 27,4	2 10	High Water.		14 33		3 2	
	13 51		3 6						

Observations at Queen Charlotte's Sound, in New Zealand, Continued.

Observations on the Tides.

1773.	Time by the Clock.	Appa- rent Time.	Height of the Water.		Remarks.	1773.	Time by the Clock.	Appa- rent Time.	Height of the Water.		Remarks.
	H'	H'	F	I.			H'	H'	F	I.	
Nov. 15.	15 01		3	8		Nov. 19.	16 40		3	4	
	15 16		3	11			17 2		3	7	
— 16.			8	6½	Low Water.		17 27		3	10	Low Water. Ditto.
	12 30		3	10			17 45		4	0	
	12 49		3	7					7	6½	
	13 14		3	1					7	4	
	14 11½	22 46,1	2	8			14 26		4	3	
— 17.	15 7		3	1	High Water.		14 31		4	2	High Water.
	15 35		3	7			14 34		4	1	
	15 55		3	10			16 16½	0 39,¼	3	1	
			8	6			17 57		4	1	
			8	1½			18 04		4	2	
— 18.	14 02		3	0	High Water.		18 08		4	3	Low Water. Ditto.
	14 58½	23 29,0	2	6½					7	2	
	15 55		3	0					7	2	
			8	0			15 35		4	4	
			7	10			15 39		4	3	
— 19.	13 37		4	0	Low Water.	— 21.	15 47		4	2	High Water.
	13 59		3	10			17 11½	1 30,3			
	14 27		3	7			18 39		4	2	
	14 52		3	4			18 43		4	3	
	15 43½	0 10,3	2	6			18 46		4	4	

In these eight days, the time of high water advanced only 4 h. 44' instead of 6 h. 40', which I conceive it ought to have done. The observations were made by means of two posts, divided into feet and inches, from their tops downwards; and their tops were placed truly level by the astronomical quadrant.

Computations of the going of the Clock.

The clock was fixed up as usual, and the pendulum of the same length.

[illegible]

Observations for the Dip of the Magnetic Needle, made at Tolaga Bay, in New Zealand, by Mr. Bayley.

1773.	Dip of the Needle's South End.				
	Face of the Instrument.		After changing the Poles.		
	East.	West.	Face East.	Face West.	
	0	0	0	0	
Nov. 15.	62 0	62 15	62 0	62 10	The latitude of Tolaga Bay Mr. Bayley found to be $38^{\circ} 21\frac{1}{2}$ S. and its longitude $178^{\circ} 33\frac{3}{4}$ E. The variation of the compass was $13^{\circ} 40'$ E.
	62 27	62 35	62 30	62 27	
	61 55	63 0	62 55	63 0	
	62 10	62 45	62 16	62 40	
	62 35	63 20	62 10	61 55	
	63 0	62 27	61 55	62 0	
	62 47	62 45	62 27	62 30	
	62 24	62 0	63 0	62 15	
	61 50	62 15	62 40	62 20	
	62 16	62 10	62 16	62 45	
Means	62 20,4	62 33,2	62 24,9	62 24,2	
Mean of the above four Means				62 25, $\frac{2}{3}$	

Observations by Mr. Bayley, at Queen Charlotte's Sound, in New Zealand.

1773.	Equal Altitudes. Times by the Clock C.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	H " "	" "			
Dec. 6.		12 9 18	11 49	} 61 0 0	16 53 39,6	☉'s U. L. }
	9 44	12 15 $\frac{1}{2}$				☉'s L. L. }
		12 18 15	20 34 $\frac{1}{2}$	} 59 20 0		☉'s U. L. }
	18 40 $\frac{1}{4}$	21 11				☉'s L. L. }
— 7.				} 59 20 0	16 53 39,6	☉'s L. L. }
	28 47 $\frac{1}{4}$	21 26 18 $\frac{1}{4}$	26 45			☉'s U. L. }
		21 29 12 $\frac{1}{2}$		} 61 0 0		☉'s L. L. }
	37 42 $\frac{3}{4}$	21 35 11 $\frac{1}{2}$	35 41			☉'s U. L. }
		21 38 9 $\frac{1}{2}$		} 61 40 0		☉'s U. L. }
	6 6	12 8 38	11 19			☉'s L. L. }
	9 3 $\frac{1}{2}$	11 34 $\frac{1}{2}$	14 6 $\frac{1}{2}$	} 54 40 0		☉'s U. L. }
	43 29 $\frac{1}{2}$	12 46 0 $\frac{1}{2}$	48 29 $\frac{1}{2}$			☉'s L. L. }
		48 54 $\frac{1}{2}$	51 25 $\frac{1}{2}$	} 52 0 0		☉'s U. L. }
	57 41	13 0 11 $\frac{1}{2}$	2 41 $\frac{1}{2}$			☉'s L. L. }
	0 38 :	3 7	5 37 $\frac{1}{4}$			
— 8.					16 56 53,68	

Observations by Mr. Bayley, at Queen Charlotte's Sound, in New Zealand.

1773.	Equal Altitudes. Times by Clock C.			Zenith Distance.	Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	H " "	" "			
♀ Dec. 8.	53 16 $\frac{1}{4}$	20 50 46 $\frac{1}{2}$	48 17 $\frac{1}{2}$	52 0 0	17 0 08,77	☉'s L. L.
	56 11 $\frac{1}{4}$	53 42 $\frac{1}{4}$	51 11 $\frac{3}{4}$			☉'s U. L.
		21 4 59	2 29 $\frac{1}{2}$	54 40 0		☉'s L. L.
	10 23 $\frac{1}{2}$	21 7 54 $\frac{1}{4}$	5 24			☉'s U. L.
	44 52	21 42 18 $\frac{3}{4}$	39 49 :	61 40 0		☉'s L. L.
		21 45 17 $\frac{1}{2}$	42 46 $\frac{1}{2}$			☉'s U. L.
	12 37	12 15 8 $\frac{1}{2}$	17 38 $\frac{1}{2}$	61 0 0		☉'s U. L.
		12 18 4 $\frac{1}{2}$	20 35 $\frac{1}{4}$			☉'s L. L.
		13 40 30	43 02	45 0 0		☉'s U. L.
	40 57 $\frac{1}{2}$	13 43 28 $\frac{1}{2}$	46 01 $\frac{1}{4}$			☉'s L. L.
♂ — 9.	19 26	20 16 53 $\frac{1}{2}$	14 21	45 0 0	17 3 23,95	☉'s L. L.
		20 19 52 $\frac{3}{4}$	17 20 $\frac{1}{4}$			☉'s U. L.
		21 42 19 $\frac{1}{2}$	39 50 $\frac{1}{2}$	61 0 0		☉'s L. L.
	47 45 $\frac{1}{2}$	21 45 17 $\frac{1}{4}$	42 45 $\frac{1}{2}$			☉'s U. L.
	45 50	12 48 20 $\frac{1}{4}$	50 49	55 20 0		☉'s U. L.
	48 46 $\frac{1}{2}$	12 51 16 $\frac{1}{2}$				☉'s L. L.
	36 22 $\frac{1}{2}$	13 39 53 $\frac{1}{2}$	42 24 $\frac{1}{4}$	45 40 0		☉'s U. L.
	40 21 :	13 42 51 $\frac{1}{2}$	45 22 $\frac{1}{2}$			☉'s L. L.
				45 40 0		☉'s L. L.
						☉'s L. L.
♀ — 10.	26 33 $\frac{1}{2}$	20 24 2	21 32	45 40 0	17 6 40,90	☉'s L. L.
	28 29 $\frac{1}{4}$	20 26 59 $\frac{1}{2}$	24 28 $\frac{3}{4}$			☉'s U. L.
	18 8	21 15 37 $\frac{1}{2}$		55 20 0		☉'s L. L.
	21 3 $\frac{1}{4}$	21 18 32 $\frac{1}{2}$	16 2 $\frac{1}{4}$			☉'s U. L.
	20 21 $\frac{1}{2}$	12 22 53	25 24	60 40 0		☉'s U. L.
	23 18	12 25 49 $\frac{1}{2}$	28 19 $\frac{1}{2}$			☉'s L. L.
	6 37 $\frac{1}{2}$	13 9 7	11 37	52 0 0		☉'s U. L.
		13 12 3 $\frac{1}{2}$	14 31 $\frac{1}{2}$			☉'s L. L.
				52 0 0		☉'s L. L.
						☉'s L. L.
♂ — 11.	6 48 $\frac{1}{2}$	21 4 19 $\frac{1}{2}$	1 50	52 0 0	17 09 56,71	☉'s L. L.
	50 8 $\frac{1}{4}$	21 47 36 $\frac{1}{2}$	45 6			☉'s U. L.
	53 4 $\frac{1}{2}$	21 50 34 $\frac{1}{4}$	48 2 $\frac{1}{2}$	60 40 0		☉'s L. L.
	52 49 :	11 55 21	57 55			☉'s U. L.
	55 46 $\frac{3}{4}$	11 58 21		66 20 0		☉'s L. L.
	53 40 $\frac{1}{2}$	12 56 11	58 41			☉'s U. L.
	56 36 $\frac{1}{2}$	12 59 7	1 37	55 0 0		☉'s L. L.
						☉'s L. L.
				55 0 0		☉'s L. L.
						☉'s U. L.
☉ — 12.	23 23	21 20 52 $\frac{1}{2}$	18 23	55 0 0	17 09 56,71	☉'s L. L.
	26 17 $\frac{3}{4}$	21 23 47 $\frac{1}{2}$	21 18 $\frac{1}{4}$			☉'s U. L.
	24 11 $\frac{1}{2}$	22 21 38		66 20 0		☉'s L. L.
	27 9	22 24 37 $\frac{1}{4}$	22 5 $\frac{1}{2}$			☉'s U. L.

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

1773.	Equal Altitudes. Times by Clock C.			Zenith Distance.	Time of ap- parent Noon by the Clock.	Phenomena and Remarks.	
	Lower Wire.	Middle Wire.	Upper Wire.				
	" "	H " "	" "				
☉ Dec. 12.	50 25½	11 52 59	55 31	} 67 20 0	17 13 13,24	☉'s U. L.	
	53 24	11 55 59				☉'s L. L.	
	46 5	12 48 34	51 5½	} 57 0 0		☉'s U. L.	
	49 0½	12 51 30¾	53 59½			☉'s L. L.	
☽ — 13.							
	37 33	21 35 0	32 31	} 57 0 0	17 19 50,31	☉'s L. L.	
	40 27¼	21 37 56½	35 28			☉'s U. L.	
	33 6½	22 30 33		} 67 20 0		☉'s L. L.	
	36 5½	22 33 32¼	31 0½			☉'s U. L.	
☽ — 14.	14 43½	12 17 15½		} 64 0 0	17 19 50,31	☉'s U. L.	
	17 42½					☉'s L. L.	
	50 31	12 52 59½	55 31	} 57 20 0		☉'s U. L.	
	53 25½					☉'s L. L.	
	27 46½	13 30 17	32 47¼	} 50 20 0	17 19 50,31	☉'s U. L.	
	30 43¼	13 33 13½	35 43½			☉'s L. L.	
☽ — 15.							
	9 1½	21 6 29	4 0½	} 50 20 0		17 19 50,31	☉'s L. L.
	11 54½	21 9 25	6 54½		☉'s U. L.		
	46 17	21		} 57 20 0	☉'s L. L.		
	49 13¼	21 46 43	44 13		☉'s U. L.		
	22 4	22		} 64 0 0	17 19 50,31	☉'s L. L.	
	25 1½	22 22 29½				☉'s U. L.	

Computations of the Rate of going of the Clock C.

1773.	Time of apparent Noon by the Clock.	Syderial Time of apparent Noon.	Clock too flow for Syderial Time.	Clock loses on Syderial Time.
	H ' "	H ' "	' "	' "
♂ Dec. 7.	16 53 39,6	16 56 07,70	2 28,10	
♀ — 8.	16 56 53,68	17 0 30,70	3 37,02	I 8,92
♂ — 9.	17 0 08,77	17 4 54,20	4 45,43	I 8,41
♀ — 10.	17 3 23,97	17 9 18,52	5 54,55	I 9,12
♂ — 11.	17 6 40,90	17 13 43,20	7 02,30	I 7,75
♀ — 12.	17 9 56,71	17 18 8,01	8 11,30	I 9,00
♂ — 13.	17 13 13,24	17 22 33,40	9 20,16	I 8,86
♀ — 15.	17 19 50,31	17 31 24,51	11 34,20	I 7,02
			Mean rate is	I 8,47

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Computations of the Rate which Mr. Arnold's Watch (No. 1.) went at.

1773.	Time by the Clock.			Time by the Watch.			Clock before the Watch.			Watch loses on the Clock.		Time between the Comparisons.		Watch loses on the Clock per Day.		Watch loses on Syderial Time per Day.		Watch loses on Syderial Time per Day.		Watch loses on mean Time per Day.				
	H	"	"	H	"	"	H	"	"	"	"	H	"	"	"	"	"	"	"	"	"			
♂ Dec. 7.	17	3	8	8	25	0	8	38	08			23	58	3	30,29	1	8,92	4	39,21	42,71				
♂ — 8.	17	4	38	8	23	0	8	41	38	3	30	23	58	3	30,29	1	8,92	4	39,21	42,71				
♂ — 9.	17	16	10	8	31	0	8	45	10	3	32	24	08	3	30,83	1	8,41	4	39,24	42,74				
♀ — 10.	17	7	40 ¹ / ₂	8	19	0	8	48	40 ¹ / ₂	3	30 ¹ / ₂	23	48	3	32,25	1	9,12	4	41,37	44,87				
♂ — 11.	16	50	11	7	58	0	8	52	11	3	30 ¹ / ₂	23	39	3	33,57	1	7,75	4	41,32	44,82				
♂ — 12.	18	8	57	9	13	0	8	55	57	3	46	25	15	3	35,07	1	9,0	4	44,07	47,57				
♂ — 13.	17	11	22	8	12	0	8	59	22	3	25	22	59	3	33,93	1	8,86	4	41,79	45,29				
♂ — 14.	16	33	52	7	31	0	9	2	52	3	30	23	19	3	36,0	1	7,02	4	43,02	46,52				
♂ — 15.	17	26	34	8	20	0	9	6	34	3	42	24	49	3	34,83	1	7,02	4	41,85	45,35				
																							44,984	

Mr. Bayley farther computes, that the Watch was too slow for mean Time, at Queen Charlotte's Sound, on December the 15th, at noon, by 15 h. 42' 17",46.

Meridian Altitudes of the Sun and Stars for determining the Latitude.

1773.	Zenith Distance.					Latitude.	Phenomena.
	Interior Arch.	Exterior Arch.		Exterior Arch reduced.			
	° ' "	G. S. V.	"	° ' "			
♂ Dec. 7.	18 42 50	19 3 27	0	18 42 48,1	41 5 58,1	☉'s L. L.	
	18 10 15	19 1 17	0	18 10 16,9		☉'s U. L.	
♀ — 10.	18 24 40	19 2 18	0	18 24 47,1	41 5 43,3	☉'s L. L.	
	17 51 18	19 0 06	0	17 51 23,2		☉'s U. L.	
♂ — 11.	18 20 0				41 5 48,2	☉'s L. L.	
	17 46 25	18 3 27	0	17 46 33,1		☉'s U. L.	
	57 05 55	60 3 20	0	57 5 58,5	41 5 27,8	Aldebaran.	
	32 36 08	34 3 3	0	32 36 0,3	41 5 33,1	Rigel.	
	69 26 18	74 0 9	— 10	69 26 17,3	41 5 17,5	β Tauri.	
	48 24 37	51 2 18	0	48 24 47,1	41 5 08,8	α Orionis.	
♂ — 13.	57 6 02	60 3 20	+ 9	57 6 7,5	41 5 35,3	Aldebaran.	
Latitude					41 5 34	South.	

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Observations for the Longitude of the Place.

1773.	Time by the Clock.		Apparent Time.	Altit. of the $\odot$'s L. L.	Zenith Distance $\odot$'s U. L.	Distance nearest Limbs of $\odot$ and $\odot$.		Barom. Inches.	Therm. In Tent. Out.		Longitude East.
	H	"				H	"		H	"	
D Dec. 6.	12	40 45	19 53 33,6	34 27	55 4 36	94 53 35	30,32	53 $\frac{1}{2}$	50	174 01 01 $\frac{1}{2}$	
		44 26		35 6	55 30 0	53 0					
		47 34		35 42	55 50 10	52 10					
		49 05		36 0	56 0 24	51 37					
		51 32		36 28	56 14 30	51 10					
	12	55 02	20 5 47,5	37 06	56 41 25	94 50 0	30,32	53 $\frac{1}{2}$	50	174 25 0	
		57 04		37 30	56 55 20	49 0					
		59 01		37 54	57 10 12	48 10					
				38 10	57 21 5	47 0					
	13	0 36	20 37 45,3	43 22	60 55 36	94 37 0	30,32	53 $\frac{1}{2}$	50	174 12 34 $\frac{1}{2}$	
		28 25		43 52	61 18 50	35 55					
		31 15		44 17	61 34 50	35 45					
		33 13		51 39	67 29 0	94 19 40					
	14	13 39	21 23 9,3	52 10	67 55 10	94 18 15	30,32	56	51	174 14 34 $\frac{1}{2}$	
		16 29		52 42	68 20 53	17 10					
		19 15		+ 4							
	8 — 7.	11	7 22	18 17 12,7	16 37	44 15 10	83 8 35	30,30	52	54 $\frac{1}{2}$	174 11 22 $\frac{1}{2}$
			14 10		17 52	6 4	6 17				
		18 21	18 36		1 18	5 25					
12		22 45	19 32 53,6	30 30	45 20 0	82 42 22	30,30	56	55	173 56 01 $\frac{1}{2}$	
		26 45		31 15	33 30	41 15					
		28 46		31 37	41 10	40 40					
		30 44		32 0	48 18	40 20					
		32 15		32 17	54 12	39 55					
		33 52		32 36	46 0 30	39 10					
8 — 8.		8	40 55	15 47 13,7	56 31	26 34	38 44 30	30,40	54	51 $\frac{1}{2}$	174 16 26 $\frac{1}{2}$
			46 56		56 02	27 37	48 0				
			50 57		55 51	28 19	49 40				
		53 37	55 42 $\frac{1}{2}$		28 42	51 10					
	8	57 12	15 58 18,0	55 31 $\frac{3}{4}$	29 17	53 15	30,40	54	52	173 52 30	
				55 22	29 56	54 30					
	9	1 14		+ 4							

ASTRONOMICAL OBSERVATIONS.

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Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Observations for the Longitude of the Place.

1773.	Time by the Clock.	Apparent Time.	Alt. of the $\odot$'s L. L.	Zenith Distance $\odot$'s U. L.	Distance nearest Limbs of $\odot$ and $\odot$.	Barom.	Therm.		Longitude East.
	H ' "	H ' "	° ' "	° ' "	° ' "	Inches.	In Tent.	° ' "	° ' "
8 Dec. 8.	10 59 26		14 40	43 37 22	70 27 25				
	11 2 15		15 10	43 21 36	26 15				
	4 28		15 35	43 9 0	26 0				
	6 58		16 0	42 56 25	25 50				
	8 46	18 09 57	16 20	42 46 36	25 10	30.37	54	52	174 9 22½
	10 43		16 39	42 36 42	25 0				
	12 23		16 58	42 28 41	24 20				
	13 58		17 16	42 21 0	23 40				
	15 45		17 34	42 12 20	22 30				
			+ 4	$\odot$'s L. L.	— 3 30	Errors of the Quadrants.			
9 — 10.	10 58 19		13 25	37 21	43 49 36	30.40	56	54	174 11 3
	11 1 36	17 55 14.2	14 0	37 54	49 15	Errors of the Quadrants as above.			
	11 3 21		14 20	38 12	48 30				
8 — 14.	3 19 50	10 1 56.0	4's first satellite emerged: the air very clear, and 4's belts exceedingly distinct: Magnifying power 150.						174 15 30

Observations on the Tides.

1773.	Appa- rent Time.	Time by the Clock.	Height of the Water.	Remarks.	1773.	Appa- rent Time.	Time by the Clock.	Height of the Water.	Remarks.		
	H ' "	H ' "	F. I.			H ' "	H ' "	F. I.			
D Dec. 13.		13 16	1 6	High Water.	D Dec. 13. 3 — 14.		15 35	1 6	Low Water.		
		13 20	1 7				19 0	0 8 $\frac{1}{4}$			
		13 25	1 8				19 12	0 7			
		13 30	1 9			2 18	19 34	0 6 $\frac{1}{2}$			
		13 38	1 10				19 50	0 7			
		13 42	1 10 $\frac{1}{2}$				20 13	0 8 $\frac{1}{4}$			
		13 47	1 11				14 0	1 9			
	21 7	14 23	1 11 $\frac{3}{4}$				14 5	1 10			
		14 55	1 11				14 15	2 0 $\frac{1}{2}$			
		15 1	1 10 $\frac{1}{2}$				14 25	2 02 $\frac{1}{2}$			
		5	1 10				14 30	2 03 $\frac{1}{2}$			
		15	1 9				14 45	2 04 $\frac{1}{2}$			
		23	1 8				21 51	15 10		2 05 $\frac{1}{2}$	High Water.
		30	1 7					15 40		2 04 $\frac{1}{2}$	

U

Observations by Mr. Bayley, at Queen Charlotte's Sound, Continued.

Observations on the Tides.

1773.					1773.							
1773.	Appa- rent Time.	Time by the Clock.		Height of the Water.	Remarks.	1773.	Appa- rent Time.	Time by the Clock.		Height of the Water.	Remarks.	
	H		H	F. I.			H		H	F. I.		
8 Dec. 14.		15	47	2	$3\frac{1}{2}$	8 Dec. 15.		15	25	2	2	
		15	53	2	$2\frac{1}{2}$			15	41	2	3	
		16	03	2	$0\frac{1}{2}$		22 39	16	1	2	$4\frac{1}{4}$	High Water.
		16	15	1	10			16	25	2	3	
		16	22	1	9			16	35	2	2	
8 — 15.		19	50	0	9		16	45	2	$0\frac{1}{2}$		
		19	56	0	$8\frac{1}{2}$		16	51	1	$11\frac{1}{2}$		
	3 5	20	25	0	7	Low Water.		17	5	1	$10\frac{1}{2}$	
		20	55	0	$8\frac{1}{2}$			20	40	0	8	
		20	58	0	9		20	47	0	7		
		15	0	1	$10\frac{1}{2}$		3 54	21	17	0	6	Low Water.
		15	6	1	$11\frac{1}{2}$			21	46	0	7	
		15	14	2	$0\frac{1}{2}$			21	55	0	8	

In the foregoing Observations, Mr. Bayley used two posts, as I did; but the o, or beginning of the divisions on that he found the high water by, was 4 feet and $\frac{3}{4}$ of an inch higher than o on that whereby low water was estimated: consequently, so much must be added to the difference of the heights of the water, as put down at these two times.

Observations by Mr. Bayley, at the Cape of Good Hope.

1774.	Equal Altitudes. Times by the Clock C.			Zenith Distances.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire	Upper Wire.			
		H			H	
♂ March 22.	21 40	20 24 27	26 34	62 20 0		☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
	24 29	20 26 56½	29 24			
	33 8	20 34 37¼	37 5½	60 20 0		
	35 0½	20 37 29½			0 6 17,66	
♀ — 23.	37 12	3 34 43½		60 20 0		☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. }
	40 03¾	3 37 35¼	35 5½			
	47 41¼	3 45 14	42 46½	62 20 0		
	50 31	3 48 4	45 37½			
	45 46½	19 48 7¼	50 29¾	70 0 0		☉'s U. L. } ☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
	48 27½	19 50 51¾	53 12½			
		20 6 46	9 8	66 20 0		
	7 4¾	20 9 30½	11 52½			
	18 04	20 20 29	22 55	63 40 0		☉'s U. L. } ☉'s L. L. }
	20 50½	20 23 19½	25 44		0 8 18,70	
♂ — 24.	55 51½	3 52 55¼	50 30	63 40 0		☉'s L. L. } ☉'s U. L. } ☉'s L. L. } Westerly. ☉'s U. L. }
	58 9¼	3 55 44	53 18½			
	9 8	4 6 43	4 18½	66 20 0		
		4 9 29½	7 5¼			
	27 41½	4 25 19½	22 58¼	70 0 0		☉'s L. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	30 24½	4 28 3¼	25 42½			
♀ — 25.		19 45 19½	47 40½	71 50 0		
	45 41¼	19 48 3½				
	8 43	20 11 8		66 45 0		☉'s L. L. } ☉'s U. L. }
		20 13 55½			0 12 21,62	
♂ — 26.		4 10 23		66 45 0		☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. }
	15 34½	4 13 9¾				
	38 36	4 36 16		71 50 0		☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
		4 38 57	36 38			
☉ — 27.	20 37	21 23 20	26 05	54 40 0		
	23 44½	21 26 30	29 14½			
		21 34 18	37 06	52 48 0		☉'s L. L. } ☉'s U. L. }
	34 43½	21 37 34½			0 16 25,08	
♂ — 28.		2 54 53		52 48 0		☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. }
			55 20½			
		3	3 14	54 40 0		☉'s U. L. } Cloudy.
		3 9 6:				

Observations by Mr. Bayley, at the Cape of Good Hope, Continued.

1774.	Equal Altitudes. Times by the Clock C.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.		
	Lower Wire.	Middle Wire.	Upper Wire.					
	" "	H " "	" " "					
♂ March 29.	Removed the Tent, Clock, &c. into another part of the garden, because where it had stood hitherto, the wind blew a great deal of sand and dust into the Observatory, which hurt the instruments: but in doing of this, the length of the pendulum was not altered, but the pendulum was secured as it was. The Clock stood before facing the north; it now faced the south, so that in both cases the pendulum vibrated E. and W. or parallel to the Table Mountain nearly.							
♀ — 30.	26 45	7 30 4½	33 24½	} 58 30 0	9 56 40, 12	Regulus East.		
	26 35¼	12 23 16½	19 55			Regulus West.		
		20 24 16½	26 42¼	} 69 40 0		☉'s U. L.		
	24 39	20 —	29 28			☉'s L. L.		
	37 21½	20 29 47¼	42 1	} 66 40 0		☉'s U. L.		
	40 10	20 42 37	45 5½			☉'s L. L.		
	47 50	20 50 19	52 48¼	} 64 40 0		☉'s U. L.		
	50 40½	20 53 11	55 40			☉'s L. L.		
				} 64 40 0	0 35 32, 56	☉'s L. L.		
	20 0	4 17 31	14 59½			☉'s U. L.		
	22 50	4 20 21½	17 53½	} 66 40 0		☉'s L. L.		
	30 30½	4 28 1½	25 36			☉'s U. L.		
33 19¼	4 30 51¼	28 24	} 69 40 0	☉'s L. L.				
46 2¼	4 —	41 10¾		☉'s U. L.				
	4 46 22	43 57½	} 63 40 0	☉'s U. L.	☉'s L. L.			
56 48	20 59 17½	1 48			☉'s U. L.			
59 40	21 2 11½	4 43	} 61 40 0		☉'s L. L.			
7 38	21 10 16	12 40			☉'s U. L.			
10 29½	21 13 3½	15 36	☉'s L. L.					
♂ — 31.					} 61 40 0	0 37 52, 57	☉'s L. L.	
	4 52	4 2 18	59 44	☉'s U. L.				
	7 48½	4 5 15¼	2 41¼	} 63 40 0	☉'s L. L.			
	15 41	4 13 9	10 37		☉'s U. L.			
	18 32	4 16 3	13 32	} 70 40 0	☉'s L. L.			
	23 49	20 26 13	28 38		☉'s U. L.			
	26 35	20 29 0	31 25½	} 68 20 0	☉'s U. L.	☉'s L. L.		
	35 51	20 38 20	40 44			☉'s U. L.		
	38 38½	20 41 06	43 32	} 68 20 0		☉'s L. L.		
						☉'s U. L.		
	♀ April 1.					} 68 20 0	0 40 10, 64	☉'s L. L.
		41 17	4 38 49	36 22¼				☉'s U. L.
		4 41 39	39 12½	} 70 40 0	☉'s L. L.			
53 11		4 50 56	48 29½		☉'s U. L.			
56 7		4 53 42¼	51 17	} 70 20 0	☉'s L. L.			
36 13½		20 38 39½	41 17½		☉'s U. L.			
39 0½		20 41 29½	43 50¾	} 68 0 0	☉'s U. L.	☉'s L. L.		
		20 50 54	53 22¼			☉'s U. L.		
51 14½		20 53 44		☉'s L. L.				

Observations by Mr. Bayley, at the Cape of Good Hope, Continued.

1773.	Equal Altitudes. Times by the Clock C.			Zenith Distance.	Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	H	H	H		H	
☉ April 3.		21 59 52	2 43	} 55 40 0		☉'s U. L. } Easterly. ☉'s L. L. }
☽ — 4.	0 18 $\frac{1}{2}$	22 3 9				
	33 42 $\frac{1}{2}$	3 30 52		} 55 40 0	0 47 12,0	☉'s L. L. } ☉'s U. L. }
	42 43 $\frac{1}{2}$	3 34 8 $\frac{3}{4}$	31 17 $\frac{1}{2}$			
		4 40 13 $\frac{1}{2}$		} 68 0 0		☉'s L. L. } Westerly. ☉'s U. L. }
		4 43 5 $\frac{1}{2}$	40 36 $\frac{1}{4}$			
	54 55 $\frac{3}{4}$	4 52 29 $\frac{1}{4}$	50 02	} 70 20 0		☉'s L. L. } ☉'s U. L. }
	57 45	4 55 17 $\frac{1}{2}$	52 51 $\frac{1}{2}$			
	39 51	20 42 15 $\frac{3}{4}$	44 43 $\frac{1}{2}$	} 70 20 0		☉'s U. L. } ☉'s L. L. }
	42 37 $\frac{1}{2}$	20 45 6				
	52 3 $\frac{1}{2}$	20 54 33	57 02	} 68 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
	54 54 $\frac{1}{4}$	20 57 24 $\frac{1}{2}$	59 54			
	8 05	21 10 38 $\frac{1}{2}$	13 11 $\frac{1}{2}$	} 65 0 0		☉'s U. L. } ☉'s L. L. }
	11 01 $\frac{1}{2}$	21 13 34				
♂ — 5.				} 65 0 0	0 49 33,30	☉'s L. L. } ☉'s U. L. }
	27 41 $\frac{1}{2}$	4 25 09 $\frac{1}{2}$				
	30 35 $\frac{1}{2}$	4 28 4	25 31	} 68 0 0		☉'s L. L. } Westerly. ☉'s U. L. }
	43 46 $\frac{1}{2}$	4 41 17 $\frac{1}{2}$	38 46 $\frac{1}{2}$			
	46 36 $\frac{1}{2}$	4 44 7 $\frac{1}{2}$	41 38 $\frac{1}{4}$	} 70 20 0		☉'s L. L. } ☉'s U. L. }
	56 3 $\frac{3}{4}$	4 53 36				
	58 49 $\frac{1}{2}$	4 56 24 $\frac{1}{2}$	53 57 $\frac{1}{2}$	} 70 20 0		☉'s U. L. } ☉'s L. L. }
	43 25 $\frac{1}{2}$	20 45 52 $\frac{1}{4}$	48 21			
	46 14	20 48 42 $\frac{1}{2}$		} 67 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
	1 03	21 3 31 $\frac{1}{2}$	6 2 $\frac{1}{2}$			
	3 53 $\frac{1}{2}$	21 6 25	8 57			
♀ — 6.				} 67 0 0	0 51 54,655	☉'s L. L. } Westerly. ☉'s U. L. }
	39 31	4 36 59 $\frac{1}{2}$	34 28 $\frac{1}{2}$			
	42 23 $\frac{1}{2}$	4 39 52 $\frac{1}{4}$	37 22 $\frac{1}{2}$	} 70 20 0		☉'s L. L. } ☉'s U. L. }
	57 9 $\frac{1}{2}$	4 54 41 $\frac{1}{2}$				
	59 58 $\frac{1}{4}$	4 57 31 $\frac{1}{2}$	55 04	} 72 40 0		☉'s U. L. } ☉'s L. L. }
♂ — 9.	45 38	20 48 5	50 33 $\frac{3}{4}$			
	48 25 $\frac{1}{2}$	20 50 54 $\frac{1}{2}$	53 22 $\frac{1}{2}$	} 68 40 0		☉'s U. L. } Easterly. ☉'s L. L. }
	6 49	21 9 20 $\frac{1}{2}$	11 52			
	9 42 $\frac{3}{4}$	21 12 15 $\frac{1}{4}$	14 47	} 66 45 0		☉'s U. L. } ☉'s L. L. }
	17 10 $\frac{3}{4}$	21 19 44 $\frac{3}{4}$	22 19 $\frac{1}{2}$			
	20 06 $\frac{1}{2}$	21 22 41	25 16			
☉ — 10.				} 66 45 0	1 1 24,12	☉'s L. L. } Westerly. ☉'s U. L. }
	42 16	4 39 41 $\frac{1}{2}$	37 6 $\frac{1}{2}$			
	45 13 $\frac{1}{2}$	4 42 39 $\frac{1}{2}$	40 04 $\frac{1}{4}$			

Observations by Mr. Bayley, at the Cape of Good Hope, Continued.

1773.	Equal Altitudes. Times by Clock C.			Zenith Distance.	Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	H " "	" "	" "	H " "	
☉ April 10.	52 41	4 50 8½	47 36	68 40 0		☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. }
	55 33¾	4 53 2½	50 31			
	13 55½	5 11 29	9 0	72 40 0		
	16 44½	5 14 17¾	11 49¾			

*. It is manifest, at first sight, that the clock went considerably faster after it was taken down than it did before. Mr. Bayley remarks, that he is absolutely certain that no alteration happened in the length of the pendulum, but does not attempt to assign any other cause, which indeed does not seem easy to be done. When it was first set up, the pendulum vibrated 1° 44' each way from the perpendicular, or point of rest, and increased its vibrations regularly, until it was removed, when its vibrations were 1° 48' each way. After it was removed, the vibrations were from 1° 46' to 1° 47' each way.

Computations of the going of Clock C.

1774.	Time of apparent Noon by the Clock.	Syderial Time of apparent Noon.	Clock flow of Syderial Time.	Clock loses on Syderial Time.
	H " "	H " "	" "	" "
☿ March 23.	0 6 17,66	0 10 36,5	4 18,84	1 36,66
♄ — 24.	0 8 18,70	0 14 14,2	5 55,50	1 36,35
♂ — 26.	0 12 21,62	0 21 29,82	9 08,20	1 35,96
♂ — 28.	0 16 25,08	0 28 45,2	12 20,12	1 36,327
Removed the Observatory, Clock, &c.				
☿ — 30.	0 35 32,56	0 36 00,8	0 28,24	1 17,79
♄ — 31.	0 37 52,57	0 39 38,6	1 46,03	1 19,87
♀ April 1.	0 40 10,64	0 43 16,54	3 05,90	1 17,97
♂ — 4.	0 47 12,00	0 54 11,8	6 59,80	1 17,40
♂ — 5.	0 49 33,30	0 57 50,5	8 17,20	1 17,44
♂ — 6.	0 51 54,66	1 1 29,3	9 34,64	1 17,08
☉ — 10.	1 1 24,12	1 16 07,1	14 42,98	1 17,925

Observations for the Variation.

1774.	Zenith Distance ☉'s U. L.	Azimuth of the ☉'s Center.	Variation West.
	" "	" "	" "
♄ April 7.	74 0 5	S. 87 37½ E.	21 59,10
	73 0 40	88 47½	
	72 15 32	S. 89 30 E.	
	71 46 27	90 0	21 30,00
	71 13 10	91 0	
♀ — 8.	76 29 42	S. 86 42½ E.	21 27,46
	75 10 23	88 12½	
	73 16 26	89 0	
	71 55 12	N. 46 35 W.	21 25,50
	72 43 31	47 17½	
	73 13 12	48 30	
The mean is			21 35 ⅓ West.

ASTRONOMICAL OBSERVATIONS.

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Observations by Mr. Bayley, at the Cape of Good Hope, Continued.

Lunar Observations for the Longitude.

1774.	Time by the Clock.	Apparent Time.	Zenith Distance D's L. L.	Distance D from ☉ or *.	Barom.	Therm.		Longitude East.		
	H ' "	H ' "	° ' "	° ' "		In Tent. °	Out. °	° ' "		
♂ March 29.	12 35 54	12 11 16	34 16 10	69 23 40	30,10	59½	57	18 17 0	☉ and Regulus.	
	40 34		33 31 50	25 0						
	44 3		33 0 27	25 30						
	47 31		32 29 7	26 42						
	51 40		31 52 40	27 45						
	54 22		31 30 0	29 45						
				— 6 30	Errors of the Quadrant.					
	13 0 46	12 33 46	30 36 0	31 45 10	30,10	59½	57	18 24 25	☉ and Antares.	
	4 8		30 8 30	43 15						
	6 47		29 48 20	41 45						
	9 11		29 30 0	41 05						
	12 40		29 3 44	40 10						
	15 47		28 41 22	39 0						
				— 6 30	Errors of the Quadrant.					
	♀ April 1.	21 16 19	20 41 18	52 52 38	108 39 30	30,02	68	68	18 29 15	☉ and ♀.
		20 01		53 36 42	37 40					
		22 33		54 7 30	36 47					
24 51		54 35 27		35 30						
27 18		55 04 40		34 37						
29 55		55 36 4		33 10						
21 32 37		20 56 19	56 9 50	108 32 12	30,02	68	68	18 33 22	☉ and ☉.	
35 16			56 40 0	30 50						
37 36			57 9 42	30 0						
39 30			57 31 15	29 30						
41 41			57 57 27	28 10						
44 31			58 31 18	26 47						
				— 4 10	Errors of the Quadrant.					
h — 2.		21 36 37	20 57 2	44 42 33	95 10 0	30,06	66½	67	18 21 30	☉ and ♀.
		39 37		45 18 20	8 10					
	41 49	45 44 22		6 30						
	43 52	46 9 0		6 0						
	46 5	46 35 47		5 0						
					— 4 10					

ASTRONOMICAL OBSERVATIONS.

Observations by Mr. Bayley, at the Cape of Good Hope, Continued.

Lunar Observations for the Longitude.

1774.	Time by the Clock.			Apparent Time.	Zenith Distance D's U.L.			Distance of the ☉ and D's Limbs.		Barom.	Therm.		Longitude East.		
	H	'	"		H	'	"	☉	D		In Tent.	Out.			
h April 2.	21	48	10	21 06 16½	47	0	37	95	4	30	30,06	66½	67	18 13 38	☉ and D.
		49	58		47	22	0		3	20					
		51	34		47	41	25		3	0					
		53	42		48	7	0		1	40					
										— 4 10	Error of the Quadrant.				
D — 4.	21	49	57	21 7 30¾	27	17	42	68	49	50	30,0	61	66	18 18 0	☉ and D.
		53	02		27	48	0		49	4					
		55	33		28	12	10		47	30					
		58	08		28	37	37		47	0					
	22	0	48	21 21 34¾	29	3	15		46	28	30,0	61	66	18 24 10	☉ and D.
		3	10		29	28	20		45	47					
	22	5	20		29	50	30		44	40					
		7	20		30	10	43		44	0					
		9	33	21 21 34¾	30	33	25		43	28	30,0	61	66	18 24 10	☉ and D.
		11	55		30	58	17		42	20					
		14	16		31	3	27		41	27					
		16	46		31	49	30		41	0					

Observations on the Tides.

1774.	Height of the Water.		Time by the Clock.	Apparent Time.	Remarks.	1774.	Height of the Water.		Time by the Clock.	Apparent Time.	Remarks.
	F.	I.					F.	I.			
h April 9.	2	4	20 20	20 24,0	Low Water.	h April 9	2	1½	21 40	2 26,0	High Water.
	2	3	20 25				2	2½	21 45		
	2	2	20 35				2	3	21 50		
	2	1½	20 40				2	4	21 55		
	2	1½	20 50				1	4	3 1		
	2	2½	21 0			☉ — 10.	1	4½	3 5		
	2	1½	21 10				1	5	3 10		
	2	0½	21 20				1	5	3 15		
	2	0½	21 25				1	5	3 20		
	2	0½	21 30				1	5½	3 25		
	2	0½	21 35				1	5½	3 30		

Observations by Mr. Bayley, at the Cape of Good Hope, Continued.

Observations on the Tides.

1774.	Height of the Water.		Time by the Clock.		Appa- rent Time.	Remarks.	1774.	Height of the Water.		Time by the Clock.		Appa- rent Time.	Remarks.
	F.	I.	H.	'				F.	I.	H.	'		
☉ April 10.	I	5 $\frac{1}{2}$	3	35			☉ April 10.	I	4	3	55		
	I	5	3	40				I	3 $\frac{1}{2}$	4	0		
	I	4 $\frac{3}{4}$	3	45				I	2 $\frac{1}{2}$	4	5		
	I	4 $\frac{1}{2}$	3	50				I	2	4	10		

The above Observations were made in the same manner as those which Mr. Bayley made at New Zealand and Otaheite; but it is to be noted, that the ☉, or beginning of the divisions of his instrument, was placed five feet seven inches higher at the time of high water, than it was at low; from which quantity, if seven inches, the difference of the heights of high and low water, by the instrument, be subtracted, there will remain five feet for the quantity which the tide flowed on this day.

Observations made on the Island Ohitahoo, one of the Marquesas.

Observations for the Latitude.

1774.	°	'	
☉ April 9.	35	18	Supplement to the double altitude of the ☉'s L. L. Error of the Quadrant, 1' $\frac{3}{8}$ to be added.
☉ — 10.	36	3	Ditto. Error of the Quadrant, 1' 50" to be added.

The first of these Observations gives $9^{\circ} 55' \frac{1}{4}$ South for the Latitude; and the latter $9^{\circ} 55' \frac{3}{4}$. They were taken from a quicksilver horizon with a Hadley's Sextant, and by the back Observation.

Observations made on the Island Ohitahoo, one of the Marquesas, Continued.

Observations for the Dip of the Magnetic Needle's South End.

1774.	Face of the Instrument.		Face of the Instrument.		Face of the Instrument.	
	East.	West.	East.	West.	East.	West.
	°	°	°	°	°	°
	19 30	19 15	18 30	19 20	11 30	11 20
	19 45	18 13	17 50	19 30	11 40	11 35
	17 30	17 10	15 50	19 40		
	18 0	17 45	15 40	19 0		
	18 05	18 05	16 0	19 0		
	18 10	18 15	15 50	19 05		

The above Observations were made on three different days, the guard not staying long enough on shore to permit me to take more at one time, nor even to balance the Needle with more accuracy. I imagined that I had changed the Poles of the Needle between every day's Observations; but the near agreement which is between the first and second, and the great disagreement between these and the Observations of the third day, incline me to believe that I made some mistake, and did not actually change them the first time.

Observations on the Tides.

The high surf, and small time that I had an opportunity of being on shore, rendered it impossible for me to make either very accurate or very regular Observations of this kind; but I gathered, in the best manner I could, that it was high water on $\text{\textcircled{A}}$ April 8, 1774, about one o'clock in the afternoon, and that it had fallen about $3\frac{3}{4}$ feet at seven o'clock, when I went on board, and I believe it was near, if not quite, low water. I got no Observations on the 9th; but on $\text{\textcircled{C}}$ the 10th it was low water about nine in the morning, and high water about three in the afternoon, certainly not sooner; and the water flowed nearly four feet. It was low water on $\text{\textcircled{D}}$ morning the 11th, about 10 o'clock, and the water ebbed out, from the last night's tide, about four feet. It will readily be understood, that too much stress must not be laid on these Observations, when I declare that the surf generally broke on the shore as high as myself.

I had no Observations for determining the Longitude of this place while here, except by the watch; but by the mean of a great many taken, some before we arrived, and others after we left the place, and reduced very carefully by the watch, it appeared to be $220^{\circ} 51\frac{1}{2}$ East.

Observations made on Point Venus, in Otaheite.

1774.	Equal Altitudes. Times by the Clock B.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	H " "	" "		H " "	
♀ April 22.	50 31 :	21 52 27	56 46	72 0 0		☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
	52 53 $\frac{1}{2}$	54 50 $\frac{1}{4}$	4 11	45 0 0		
	59 26	0 1 47	7 7			
	2 20	4 45				
♂ — 23.					2 19 43,89	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } ☉'s U. L. }
	36 54	4 34 31	32 10	45 0 0		
	39 48	37 26	35 06 $\frac{1}{2}$	72 0 0		
	46 22	6 44 24	42 27 $\frac{1}{4}$			
	48 45	46 48	44 51			
♂ — 25.	33 29	23 35 39	37 52	52 0 0		☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
	36 07 $\frac{1}{2}$	38 24	40 35			
	45 20	23 47 35	49 49 $\frac{1}{2}$	49 40 0		
	48 05	50 21	52 36			
♂ — 26.					2 26 55,03	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	5 32	5 3 16	0 59 $\frac{1}{2}$	49 40 0		
	8 19	6 04	3 48 $\frac{1}{2}$			
	17 24 $\frac{3}{4}$	5 15 11 $\frac{1}{2}$	13 0 $\frac{1}{2}$	52 0 0		
	20 09	17 55 $\frac{3}{4}$	15 44 $\frac{1}{2}$			
	8 28 $\frac{1}{4}$	22 10 27 $\frac{1}{2}$	12 26 $\frac{1}{2}$	70 40 0		
	10 54 $\frac{1}{2}$	12 53 $\frac{3}{4}$	14 52			
	41 52	23 44 6 $\frac{1}{2}$	46 20 $\frac{1}{4}$	51 0 0		
	44 37	46 51 $\frac{3}{4}$	49 7			
♀ — 27.					2 29 19,91	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
	13 49	5 11 34 $\frac{1}{2}$	12 6 $\frac{1}{2}$	51 0 0		
	16 33 $\frac{3}{4}$	14 20	43 37	70 40 0		
	47 32 $\frac{3}{4}$	6 45 34	46 03			
		47 59	29 19			
♂ — 28.	25 01	23 27 10 $\frac{1}{2}$	31 59 $\frac{1}{2}$	55 40 0		
	27 40	29 50				
♀ — 29.					2 34 03,57	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
	40 14	5 38 03	35 53	55 40 0		
	42 52	40 46	38 36			
	46 38	22 48 42 $\frac{1}{2}$	50 43	64 20 0		
		51 12 $\frac{1}{2}$	53 14 $\frac{1}{2}$			
	9 34 $\frac{3}{4}$	0 11 58 $\frac{1}{4}$	14 20 $\frac{1}{4}$	47 40 0		
	12 31 $\frac{1}{2}$	0 14 55 $\frac{1}{4}$	17 20 $\frac{1}{4}$			
♂ — 30.					2 36 28,90	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
	0 6 $\frac{1}{2}$	4 57 42	55 18	47 40 0		
	03 5	5 0 40	58 17 $\frac{1}{2}$			
	23 34	6 21 32	19 30	64 20 0		
	26 06 $\frac{1}{2}$	24 04	22 0 $\frac{1}{2}$			
	54 17 $\frac{1}{2}$	23 56 36	58 53	51 0 0		
	57 06	59 25	1 41 $\frac{1}{2}$			

Observations made on Point Venus, in Otaheite, Continued

1774.	Equal Altitudes. Times by the Clock B.			Zenith Distances.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
		H			H	
☉ May 1.	18 28½ 21 18½	5 16 12 19 1	13 54 16 44½	51 0 0	2 37 54,68	☉'s L. L. } Westerly. ☉'s U. L. }
☽ — 2.	47 11½ 49 59	23 49 28½ 52 14½	51 43 54 29	53 40 0		☉'s U. L. } Easterly. ☉'s L. L. }
♂ — 3.	35 21½ 38 08 54 51 57 26 33 37½ 36 19	5 33 06 35 53½ 22 56 56 59 30 23 35 48½ 38 30	30 51 33 39 59 0 1 33 37 59 40 42	53 40 0 65 0 0 57 0 0	2 42 46,73	☉'s L. L. } Westerly. ☉'s U. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
♀ — 4.	53 56 56 38 32 53 35 25	5 51 44 54 25 6 30 46½ 33 21	49 32 52 14 31 18	57 0 0 65 0 0	2 45 14,18	☉'s L. L. } Westerly. ☉'s U. L. } ☉'s L. L. } ☉'s U. L. }
♂ — 5.	38 29 41 11½ 48 37 51 23	23 40 41 43 24 23 50 52½ 53 38½	42 52½ 45 36 53 7 55 54	57 20 0 55 20 0		☉'s U. L. } Easterly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. }
♀ — 6.	48 43½ 51 29½ 58 56 1 39 0 59½ 3 35½ 45 8 47 51½	5 46 28½ 49 14 5 56 43½ 59 27½ 23 3 6 5 40½ 23 47 22 50 06	44 14½ 47 0 54 31 57 14½ 5 10 7 44 49 35 52 20	55 20 0 57 20 0 65 40 0 56 40 0	2 50 10,05	☉'s L. L. } Westerly. ☉'s U. L. } ☉'s L. L. } ☉'s U. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
♂ — 7.	57 13 59 58½ 41 31½ 17 44 31 41 34 21	5 55 0 57 45½ 6 42 0 23 27 15½ 23 33 52½ 36 32½	55 32 37 20½ 39 56 36 02 38 40½	56 40 0 65 40 0 61 20 0 60 0 0	2 52 39,15	☉'s L. L. } Westerly. ☉'s U. L. } ☉'s L. L. } ☉'s U. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
☉ — 8.	15 44 18 24	6 13 32½ 16 14½	11 22 14 04	60 0 0	2 55 08,38	☉'s L. L. } Westerly. ☉'s U. L. }

Observations made on Point Venus, in Otaheite, Continued.

1774.	Equal Altitudes. Times by the Clock B.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
		H			H	
☉ May 8.	22 18 $\frac{3}{4}$			61 20 0		☉'s L. L. } Westerly. ☉'s U. L. }
		6 22 48 $\frac{1}{2}$				
	38 13 $\frac{1}{2}$	23 40 25	42 34	59 20 0		☉'s U. L. } Easterly. ☉'s L. L. }
	40 54 $\frac{1}{2}$	43 6	45 18			
	51 44 $\frac{1}{2}$	23 53 58	56 13	56 40 0		☉'s U. L. } Easterly. ☉'s L. L. }
	54 29	56 44	59 0			
☽ — 9.					2 57 39,25	
	0 37	5 58 22	56 6 $\frac{1}{2}$	56 40 0		☉'s L. L. } Westerly. ☉'s U. L. }
	3 23	6 1 9	58 55			
	14 11 $\frac{1}{2}$	6 11 59	9 49	59 20 0		☉'s L. L. } Easterly. ☉'s U. L. }
	16 53		12 31 $\frac{1}{2}$			

1774.	Equal Altitudes. Times by the Watch K.			Zenith Distance.	Time of apparent Noon by the Watch.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
		H			H	
♀ April 22.	33 33	8 35 53 $\frac{1}{2}$	38 16 $\frac{1}{2}$	45 0 0		☉'s U. L. } Easterly: ☉'s L. L. }
	36 26	38 50 $\frac{1}{2}$	41 13		10 53 34,72	
♂ — 23.	10 32 $\frac{1}{2}$	13 8 11	5 49	45 0 0		☉'s L. L. } Westerly. ☉'s U. L. }
	13 26 $\frac{1}{2}$	11 5	8 45			
☽ — 25.	12 20	8 14 34 $\frac{1}{2}$	16 49	49 40 0		☉'s U. L. } Easterly. ☉'s L. L. }
	15 05	17 20 $\frac{1}{2}$	19 36		10 53 39,55	
♂ — 26.	32 0	13 29 45	27 28 $\frac{1}{2}$	49 40 0		☉'s L. L. } Westerly. ☉'s U. L. }
	34 47	32 32	30 17			
♂ — 28.	45 2 $\frac{1}{2}$	7 47 12	49 20	55 40 0		☉'s U. L. } Easterly. ☉'s L. L. }
	47 41 $\frac{1}{2}$	49 51	52 0 $\frac{1}{2}$		10 53 46,57	
♀ — 29.	59 39 $\frac{1}{2}$	13 57 29	55 18 $\frac{1}{2}$	55 40 0		☉'s L. L. } Westerly. ☉'s U. L. }
	2 17	14 0 10	58 01			
	4 22 $\frac{1}{2}$	7 6 27	8 27 $\frac{1}{2}$	64 20 0		☉'s U. L. } Easterly. ☉'s L. L. }
		8 57	10 58		10 53 51,15	
♂ — 30.	40 34	14 38 33	36 30	64 20 0		☉'s L. L. } Westerly. ☉'s U. L. }
	43 7	41 04	39 01 $\frac{1}{2}$			
	10 32 $\frac{1}{2}$	8 12 51	15 08	51 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
	13 21	15 38	17 55 $\frac{1}{2}$		10 53 53,68	
☉ May 1.	34 12	13 31 55	29 38	51 0 0		☉'s L. L. } Westerly. ☉'s U. L. }
	37 2	34 44	32 28 $\frac{1}{2}$			

ASTRONOMICAL OBSERVATIONS.

Observations made on Point Venus, in Otaheite, Continued.

1774.	Equal Altitudes. Times by the Watch K.			Zenith Distance.	Time of apparent Noon by the Watch.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
		H "	" "	" "	H "	
♂ May 3.	4 7 6 41 42 49½ 45 31	7 6 12 8 45 7 45 0½ 47 42	8 15 10 48 47 11 49 54	65 0 0 57 0 0		☉'s U. L. ☉'s L. L. } Easterly. ☉'s U. L. ☉'s L. L.
♀ — 4.	2 31 5 13 41 24 43 55 42 56½ 45 38½ 53 3 55 49	14 0 19 3 0 14 39 18½ 41 51½ 7 45 8 47 50½ 7 55 19 58 04½	58 08 0 49½ 39 49 47 19½ 50 03 57 33 0 19½	57 0 0 65 0 0 57 20 0 55 20 0	10 54 7,56 10 54 18,87	☉'s L. L. ☉'s U. L. } Westerly. ☉'s L. L. ☉'s U. L. ☉'s L. L. } Easterly. ☉'s U. L. ☉'s L. L.
♀ — 6.	52 34½ 55 20 2 46 5 28½ 47 12 49 55	13 50 20 53 5½ 14 0 33½ 3 17½ 7 49 25 52 9½	48 6 50 51½ 58 21 1 4½ 51 38½ 54 25½	55 20 0 57 20 0 56 40 0	10 54 24,69	☉'s L. L. ☉'s U. L. } Westerly. ☉'s L. L. ☉'s U. L. ☉'s L. L. } Easterly. ☉'s U. L.
♂ — 7.	58 40½ 1 25 31 26 34 5	13 56 27½ 59 12½ 7 33 36½ 36 16½	56 59½ 35 46 38 27	56 40 0 60 0 0	10 54 33,19	☉'s L. L. ☉'s U. L. } Westerly. ☉'s U. L. ☉'s L. L. } Easterly. ☉'s U. L.
☉ — 8.	14 48½ 17 28 38 14½ 49 03½ 51 47½	14 12 37½ 15 19 7 37 45 40 26 7 51 17 54 2½	10 27 13 8½ 39 54 42 37½ 53 31½ 56 18½	60 0 0 59 20 0 56 40 0	10 54 39,74	☉'s L. L. ☉'s U. L. } Westerly. ☉'s U. L. ☉'s L. L. } Easterly. ☉'s U. L.
♂ — 9.	57 19½ 0 5 10 53½ 13 34	13 55 5 57 51½ 14 8 40½	52 49½ 55 38 6 29½ 9 12	56 40 0 59 20 0		☉'s L. L. ☉'s U. L. } Westerly. ☉'s L. L. ☉'s U. L.

The Clock was fixed up in the usual manner, and the pendulum, in general, while here, vibrated 1° 35' each way from the perpendicular.

Observations made at Point Venus, in Otaheite, Continued.

1774.	Meridian Zenith Distances.				Exterior Arch reduced.	Barom. Inches.	Thermom.		Phenomena and Remarks.
	Interior Arch.	Exterior Arch.					In Tent	Out.	
		G.	S.	V.					
8 May 4.	33 6 25	35 1 9		5	33 6 51	30,03	88 $\frac{1}{2}$	93	☉'s U. L.
	33 38 20	35 3 17		9	33 38 33				☉'s L. L.
4 — 5.	33 56 7	36 0 26		24	33 56 49 $\frac{1}{2}$	30,02	87 $\frac{1}{4}$	94 $\frac{3}{4}$	☉'s L. L.
	33 23 28	35 2 15		13	32 23 41				☉'s U. L.
	39 55 40	42 2 12		18	39 56 12	30,02	72	72 $\frac{1}{2}$	α Pavonis.
	61 56 30	66 0 9		16	61 56 43				α Cygni.
8 — 6.	33 40 25	35 3 21		20	33 40 30	30,02	90	97	☉'s U. L.
	34 12 15	36 1 30		12	34 12 27				☉'s L. L.
	39 55 55	42 2 13		4	39 56 24	30,03	71 $\frac{1}{4}$	72 $\frac{1}{4}$	α Pavonis.
	61 56 37	66 0 10		0	61 56 54				α Cygni.
5 — 7.	34 29 38	36 3 6		15	34 30 4	30,03	88 $\frac{1}{4}$	91 $\frac{1}{2}$	☉'s L. L.
	33 57 8	36 0 28		20	33 57 38				☉'s U. L.
	51 17 7	54 2 27		12	51 17 29 $\frac{1}{2}$	30,03	80 $\frac{1}{4}$	81	β Navis.
	30 32 52	32 2 11		18	30 33 15 $\frac{1}{2}$	30,03	78	79 $\frac{1}{2}$	Regulus.
	39 55 57	42 2 13		10	39 56 30	30,03	69 $\frac{1}{4}$	70 $\frac{1}{4}$	α Pavonis.
	61 56 45	66 0 10		8	61 57 2				α Cygni.
8 — 9.	34 30 0	36 3 7		5	34 30 21	30,03	84	91	☉'s U. L.
	35 02 22 $\frac{1}{2}$	37 1 16		20	35 2 40 $\frac{1}{2}$				☉'s L. L.
	51 17 25	54 2 28		7	51 18 2 $\frac{1}{2}$	30,03	76 $\frac{1}{4}$	77 $\frac{3}{4}$	β Navis.
	30 32 42	32 2 11		8	30 33 5 $\frac{1}{2}$	30,03	75	76	Regulus.
	38 27 15	41 0 3		10	38 27 44				γ Leonis.
	8 24 55	8 3 29		25	8 25 21	30,03	73	72 $\frac{1}{4}$	Antares.
8 — 10.	30 32 37	32 2 10		12	30 32 43	30,03	73 $\frac{1}{4}$	77 $\frac{1}{4}$	Regulus.
	38 27 12	41 0 3		15	38 27 49				γ Leonis.

For the Error of the Line of Collimation of the Quadrant.

1774.	Zenith Distance of the Upper Hole. Quadrant direct.				Zenith Distance of the Lower Hole. Quadrant inverted.				Errors.	
	Interior Arch.		Exterior Arch.		Interior Arch.		Exterior Arch.		Interior Arch.	Exter. Arch.
	° ' "		G. S. V.	" + "	° ' "		G. S. V.	" + "	"	V. "
May 3. Evening.	89 36 28		95 2 11	5	90 24 12		96 1 23	15	-16 $\frac{1}{4}$	-1 4 $\frac{1}{2}$
	32		11	3	0		23	4		
	25		10	20	0		23	3		
	30		11	6	04		23	7		
May 3. Morning.	89 35 55		95 2 9	15	90 25 12		96 1 25	0	-24 $\frac{1}{2}$	-1 8
	50		9	10	25 5		25	12		
	50		9	8	25 5		25	20		
	48		9	10	25 0		25	10		
	40		9	5	24 55		25	0		
	45		9	7	24 55		25	0		

Observations made on Point Venus, in Otaheite, Continued.

For the Error of the Line of Collimation of the Quadrant.

1773.	Zenith Distance of the Upper Hole. Quadrant direct.				Zenith Distance of the Lower Hole. Quadrant inverted.				Errors.	
	Interior Arch.		Exterior Arch.		Interior Arch.		Exterior Arch.		Interior Arch.	Exter. Arch.
	°	'	"	G. S. V. +"	°	'	"	G. S. V. +"	"	V. "
May 10.	89	35	50	95 2 10	0	90	24 48	96 1 24	18	
Evening.		36	5		9	25	24 52		24	22
		36	10		10	5	24 55		25	0
		36	0		10	8	24 50		24	18
		35	52		9	23				
Morning.	89	39	5	95 2 17	0	90	21 30	96 1 17	6	
		39	5		17	3	35		18	0
		39	0		16	18	40		17	22
		39	10		16	25	35		17	10
		39	0		16	20	45		17	20
		38	55		16	18	40		17	12
									-25 $\frac{3}{8}$	-1 10
									-20	-1 6
									-21 $\frac{1}{2}$	-33 $\frac{1}{3}$
									Mean.	

The Latitude of Point Venus, determined by
Observations made with Hadley's Quadrant.

1774.	Altitude of $\odot$'s L. L.	Declination.	Latitude S.
	°	'	"
h April 23.	59 30 $\frac{1}{2}$	12 26 54 N.	17 30 41
o — 24.	59 11 $\frac{1}{2}$	12 46 48	29 47
8 — 26.	58 51 $\frac{1}{3}$	13 25 59	30 46
8 — 27.	58 32 $\frac{1}{3}$	13 45 14	30 31
9 — 29.	57 54 $\frac{7}{8}$	14 23 24	29 16
h — 30.	57 36 $\frac{1}{2}$	14 41 38	29 4
o May 1.	57 18 $\frac{1}{4}$	14 59 58	28 59
h — 2.	57 01	15 18 2	28 9
8 — 3.	56 42 $\frac{1}{2}$	15 35 52	29 48
o — 8.	55 17	17 1 6 $\frac{1}{2}$	30 5
8 — 10.	54 46 $\frac{5}{8}$	17 33 16	28 20
The mean of all is			17 29 35

For the Dip of the Needle's South End.

Face of the Instru- ment.		Face of the Instru- ment.	
East.	West.	East.	West.
°	'	°	'
31 10	31 05	31 0	27 50
31 10	29 45	28 30	27 40
31 30	30 25	28 40	27 45
30 45	33 0	31 0	28 10
30 30	33 0	29 47 $\frac{1}{2}$	27 51 $\frac{1}{4}$
30 10	31 0	27 51 $\frac{1}{4}$	
30 40	32 10	30 45 $\frac{1}{8}$	
30 10	31 40	31 30 $\frac{3}{8}$	
30 45 $\frac{5}{8}$	31 30 $\frac{3}{8}$	29 58 $\frac{3}{4}$	Mean Dip.

* * * The poles were changed between the
Observations put down in the two first,
and those put down in the two last co-
lumnns.

Lunar Observations for the Longitude of the Place.

1774.	Time by the Clock.	Apparent Time.	Zenith Distance of the ☉ or *.	Altitude, or Zenith Distance of the ☽.	Distance of the ☽'s L. from the ☉ or *.	Barom.	Therm.	Longitude East.	Remarks, &c.
	H ' "	H ' "	° ' "	° ' "	° ' "			° ' "	
☽ April 25.	12 39 33			18 11 $\frac{1}{2}$ U. L.	53 55 $\frac{1}{4}$				
	41 51			17 41 $\frac{7}{8}$	53 56				
	44 31			17 14 $\frac{1}{2}$	53 57				
	46 31		49 01 $\frac{1}{2}$	16 56 $\frac{1}{2}$	53 58 $\frac{1}{2}$	30,05	72 $\frac{1}{2}$	210 54 06	☽ and Regulus, west of her.
	50 02			16 19	53 59 $\frac{1}{4}$				
	52 52			15 47	54 0				
				— 21 $\frac{1}{2}$ "	— 2' 36"				Error of the Quadrants.
	13 10 35			13 23 $\frac{1}{4}$	46 23				
	13 16			13 04	23				
	16 41			12 39 $\frac{3}{4}$	22	30,05	72 $\frac{1}{2}$	210 11 15	☽ and Antares, east of her.
	21 1		44 57 $\frac{5}{8}$	12 16 $\frac{3}{4}$	20 $\frac{1}{2}$				
	23 7			12 11 $\frac{1}{2}$	18 $\frac{1}{2}$				
	26 41			11 57 $\frac{5}{8}$	17 $\frac{1}{2}$				
♂ — 26.	11 55 54			37 59 $\frac{1}{2}$ U. L.	58 19 $\frac{1}{2}$				
	11 58 32			37 22 $\frac{1}{2}$	20 $\frac{1}{4}$				
	12 0 43			36 52 $\frac{1}{2}$	22	30,07	73 $\frac{1}{2}$	211 05 0	☽ and Regulus, west of her.
	12 02 41		41 14 $\frac{1}{2}$	36 25	22 $\frac{1}{4}$				
	12 04 21			36 01 $\frac{1}{2}$	23				
	12 06 24			35 32 $\frac{1}{4}$	23 $\frac{1}{2}$				
				— 21 $\frac{1}{2}$ "	+ 2' 35"				Errors of the Quadrants.
	12 16 08			33 18 $\frac{1}{2}$	31 52				
	18 56			32 39 $\frac{1}{2}$	51				
	20 22			32 20	50 $\frac{1}{4}$	30,07	73 $\frac{1}{2}$	210 29 15	☽ and Antares, east of her.
	22 05		57 28 $\frac{3}{8}$	31 56 $\frac{1}{2}$	49 $\frac{1}{2}$				
	23 56			31 31 $\frac{1}{2}$	49				
	27 56			30 35 $\frac{7}{8}$	47 $\frac{1}{2}$				
♀ — 27.	11 40 44			54 59 $\frac{3}{4}$ L. L.	30 31 $\frac{1}{2}$				
	43 01			54 29 $\frac{1}{4}$	31 $\frac{1}{4}$	30,08	77	210 4 9	☽ and Spica, west of her.
	45 02		25 37 $\frac{1}{2}$	54 0 $\frac{1}{2}$	33 $\frac{1}{4}$				
	46 25			53 41 $\frac{1}{2}$	34 $\frac{1}{4}$				
				— 21 $\frac{1}{2}$ "	+ 2' 39"				Errors of the Quadrants.
	15 9 28	12 38 53,4	☽ immersed behind the ☽'s bright Limb.						Very certain.
♀ — 29.	22 31 54			67 55 $\frac{5}{8}$ U. L.	23 12 U. L.	133 25			
	33 46			67 31	22 53	24 $\frac{1}{2}$			
	36 0			67 02 $\frac{1}{2}$	22 23	23 $\frac{3}{4}$	30,02	81 210 40 7 $\frac{1}{2}$	☉ and ☽ by the back observation.
	37 55			66 37 $\frac{5}{8}$	21 53	22 $\frac{3}{4}$			
	39 44			66 14	21 31	21 $\frac{1}{4}$			
				— 21 $\frac{1}{2}$ "	+ 1' 2"	+ 1' 8"			Errors of the Quadrants.
♂ — 30.	19 8 54			6 05 $\frac{1}{2}$ U. L.	33 29				
	10 58			6 31	29				
	12 29			6 51 $\frac{3}{4}$	30				
	14 4			7 13	30 $\frac{1}{2}$				
	15 26			7 33	30 $\frac{1}{2}$		30,02	76 $\frac{1}{2}$ 210 3 45	☽ and Antares, west of her.
	16 49		41 3 $\frac{1}{2}$	7 51 $\frac{3}{4}$	31 $\frac{1}{2}$				
	18 18			8 11 $\frac{1}{2}$	31 $\frac{1}{2}$				
	19 43			8 30 $\frac{1}{4}$	32 $\frac{3}{4}$				
	21 15			8 52	32 $\frac{1}{4}$				
				— 21 $\frac{1}{2}$ "	+ 2' 50"				Errors of the Quadrants.

Observations made at Point Venus, in Otaheite, Continued.

Lunar Observations for the Longitude of the Place.

1774.	Time by the Clock.	Apparent Time.	Zenith Distance of the ☉ or *.	Altitude, or Zenith Distance of the ☾.	Distance of the ☾'s L. from the ☉ or *.	Barom.	Therm.	Longitude East.	Remarks.
	H	H	°	°	°			°	
April 30.	19 24 47			9 41 U. L.	70 47				
	26 43			10 08	46				
	28 08			10 37 $\frac{3}{4}$	45 $\frac{1}{2}$				
	29 21			10 45 $\frac{1}{2}$	45				
	30 46		59 53 $\frac{1}{4}$	11 5	45	30,02	76 $\frac{1}{2}$	210 17 56	☾ and α Pegasi, east of her.
	32 25			11 27	44				
	34 4			11 50 $\frac{1}{4}$	44				
	36 30			12 24 $\frac{3}{4}$	43				
	38 13			12 40 $\frac{1}{2}$	42 $\frac{1}{2}$				
	39 53			13 12 $\frac{1}{2}$	41 $\frac{1}{2}$				
	22 12 0		72 42 $\frac{5}{8}$ U. L.	41 47 U. L.	119 49 $\frac{3}{4}$				
	14 5		72 15 $\frac{1}{4}$	41 17	49	30,03	79	210 2 8	☉ and ☾.
	15 25		71 58 $\frac{1}{2}$	40 57	48				
	16 26		71 44 $\frac{2}{3}$	40 45	48				
			- 21 $\frac{1}{2}$	+ 1' 32"	+ 2' 50"	Errors of the Quadrants.			
	22 21 24		70 39 $\frac{1}{4}$ U. L.	39 38 U. L.	45				
	22 33		70 24 $\frac{3}{4}$	39 18	44 $\frac{1}{2}$				
	23 35		70 10 $\frac{2}{3}$	39 7	44 $\frac{1}{4}$	30,03	79	210 11 45	☉ and ☾. Errors as above.
	24 35		69 58	38 53	44				
	26 14		69 16 $\frac{1}{2}$	38 29	44				
May 1.	22 8 13		74 11 $\frac{5}{8}$ L. L.	56 24	106 21				
	10 53		73 35	55 50	20				
	12 27		73 16	55 27	19 $\frac{1}{4}$				
	14 02		72 55	55 5	18 $\frac{1}{4}$				
	15 50		72 31 $\frac{1}{2}$	54 42	17 $\frac{1}{4}$	30,04	79	209 44 15	☉ and ☾.
	17 40		72 7	54 17	17				
	19 19		71 45 $\frac{5}{8}$	53 52	16 $\frac{1}{2}$				
	20 51		71 25 $\frac{1}{2}$	53 27	16 $\frac{1}{4}$				
	22 46		71 0 $\frac{1}{2}$	53 4	15 $\frac{3}{4}$				
	24 30		70 37 $\frac{5}{8}$	52 39	15				
			- 21 $\frac{1}{2}$	+ 4' 37"	+ 2' 45"	Errors of the Quadrants.			
	2. 19 7 41			22 15 $\frac{1}{2}$ L. L.	61 30 $\frac{1}{2}$				
	10 15			21 40 $\frac{1}{4}$	30 $\frac{3}{4}$				
	11 48			21 17 $\frac{2}{3}$	31 $\frac{1}{4}$				
	13 37			20 52 $\frac{1}{4}$	32				
	15 43		42 0 $\frac{3}{4}$	20 22	32 $\frac{3}{4}$	30,04	74	210 18 30	☾ and Antares, west of her.
	17 26			20 0	33 $\frac{1}{2}$				
	20 0			19 24	33 $\frac{3}{4}$				
	21 56			18 57 $\frac{1}{2}$	34 $\frac{1}{2}$				
	24 5			18 26	35				
	25 53			18 2	35 $\frac{3}{4}$				
				- 21"	+ 2' 20"	Errors of the Quadrants.			
D —	22 33 56		69 47 $\frac{3}{4}$ L. L.	63 43 $\frac{1}{4}$ U. L.	93 01				
	37 39		68 59 $\frac{3}{8}$	62 48 $\frac{1}{2}$	93 0				
	40 19		68 25 $\frac{1}{2}$	62 12 $\frac{1}{4}$	92 59	30,04	82	209 45 18	☾ and ☉.
	43 16		67 48	61 32	92 57 $\frac{3}{4}$				
	46 1		67 12	60 53 $\frac{3}{4}$	92 57 $\frac{1}{2}$				
			- 21 $\frac{1}{2}$	+ 1' 0"	+ 2' 45"	Errors of the Quadrants.			

ASTRONOMICAL OBSERVATIONS.

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Observations made on Point Venus, in Otaheite, Continued.

Lunar Observations for the Longitude of the Place.

1774.	Time by the Clock.	Apparent Time.	Zenith Distance of the ☉ or ☽.	Altitude, or Zenith Distance of the ☾.	Distance of ☾'s L. from ☉ or ☽.	Barom.	Therm.	Longitude East.	Remarks.
	H	H	°	°	°			°	
δ May 3.	19 38 21			28 44 $\frac{1}{2}$ L. L.	75 21 $\frac{1}{2}$				
	42 51			27 41 $\frac{1}{2}$	22 $\frac{1}{2}$				
	45 27			27 50 $\frac{1}{2}$	23 $\frac{1}{2}$				
	47 29			26 38 $\frac{1}{2}$	24 $\frac{1}{2}$				
	49 30		49 47 $\frac{1}{2}$	26 9 $\frac{1}{2}$	25 $\frac{1}{2}$	30,04 73		210 23 54	☾ and Antares, West of her.
	51 38			25 40	25 $\frac{1}{2}$				
	53 24			25 15 $\frac{1}{2}$	26				
	55 20			24 49 $\frac{1}{2}$	26 $\frac{1}{2}$				
	57 10			24 24 $\frac{1}{2}$	27 $\frac{1}{2}$				
	58 53			24 0	28 $\frac{1}{2}$				
				— 21 $\frac{1}{2}$	+ 2' 54"	Errors of the Quadrant.			
	23 45 07		55 08 $\frac{1}{2}$ U. L.	59 23 U. L.	79 46 $\frac{1}{2}$				
	46 52		54 47 $\frac{1}{2}$	59 03	46 $\frac{1}{2}$	30,02 82		209 38 15	☉ and ☾.
	48 18		54 32 $\frac{1}{2}$	58 44	45 $\frac{1}{2}$				
	49 37		54 15 $\frac{1}{2}$	58 23	45				
	50 52		54 01 $\frac{1}{2}$	58 05	44 $\frac{1}{2}$				
	52 08		53 46 $\frac{1}{2}$	57 47	44 $\frac{1}{2}$				
			— 21 $\frac{1}{2}$	+ 3' 0"	+ 2' 48"	Errors of the Quadrant.			
8 — 4.	20 20 55			32 11 $\frac{1}{2}$ L. L.	88 57 $\frac{1}{2}$				
	23 0			31 44	88 58				
	24 24			31 26	88 58 $\frac{1}{2}$				
	25 35			31 8	88 59 $\frac{1}{2}$				
	26 53		58 32 $\frac{1}{2}$	30 51 $\frac{1}{2}$	89 0	30,03 76		210 21 45	☾ and Antares, West of her.
	28 17			30 33	89 0 $\frac{1}{2}$				
	29 43			30 14	89 0 $\frac{1}{2}$				
	30 55			29 57 $\frac{1}{2}$	89 01 $\frac{1}{2}$				
	32 15			29 39	89 01 $\frac{1}{2}$				
	33 43			29 19	89 02				
				— 21 $\frac{1}{2}$	+ 2' 37 $\frac{1}{2}$	Errors of the Quadrant.			
	23 56 12 $\frac{1}{2}$		53 38 $\frac{1}{2}$ U. L.	67 37 U. L.	67 11 $\frac{1}{2}$	30,03 84 $\frac{1}{2}$		210 18 0	☉ and ☾.
	23 58 41		53 10 $\frac{1}{2}$	66 55 $\frac{1}{2}$	67 10 $\frac{1}{2}$				
	0 0 40		52 48	66 25 $\frac{1}{2}$	67 9 $\frac{1}{2}$				
	0 1 37		52 26 $\frac{1}{2}$	66 01 $\frac{1}{2}$	67 9				
	0 4 42		52 01 $\frac{1}{2}$	65 37	67 8 $\frac{1}{2}$				
			— 21 $\frac{1}{2}$	+ 3' 0"	+ 2' 33 $\frac{1}{2}$	Errors of the Quadrant.			
14 — 5	19 25 14				55 33 $\frac{1}{2}$				
	28 3				35 $\frac{1}{2}$				
	30 5				35 $\frac{1}{2}$				
	32 3				36				
	33 50		25 47 $\frac{1}{2}$	56 31 $\frac{1}{2}$	37	30,02 72		210 55 0	☾ and Aquilæ, West of her.
	35 30				37 $\frac{1}{2}$				
	37 15				38				
	39 18				38 $\frac{1}{2}$				
	40 52				39 $\frac{1}{2}$				
	42 34				39 $\frac{1}{2}$				
					+ 2' 45"	Errors of the Quadrant.			
	0 12 50		51 8 $\frac{1}{2}$ U. L.	71 38 U. L.	54 52	30,02 84		209 42 20	☉ and ☾.
	15 36		50 39 $\frac{1}{2}$	71 6	51 $\frac{1}{2}$				
	17 25		50 19 $\frac{1}{2}$	70 47	50 $\frac{1}{2}$				
	19 23		49 56 $\frac{1}{2}$	70 27	50				
	21 30		49 34	70 9 $\frac{1}{2}$	50				
	23 27		49 14	69 45	49 $\frac{1}{2}$				
			— 21 $\frac{1}{2}$	+ 4' 34"	+ 2' 47"	Errors of the Quadrant.			

B b

Observations on Point Venus, in Otaheite, Continued.

Lunar Observations for the Longitude of the Place.

1774.	Time by the Clock.	Apparent Time.	Zenith Distance of the ☉ or *.	Altitude, or Zenith Distance of the ☾.	Distance of the ☾'s L. from ☉ or *.	Barom.	Therm.	Longitude East.	Remarks:
♀ May 6.	H M S	H M S	° ' "	° ' "	° ' "			° ' "	
19	47 27			65 21 $\frac{1}{2}$ L. L.	66 58				
	49 25			64 55	66 58 $\frac{1}{2}$				
	50 43			64 36 $\frac{1}{2}$	66 59 $\frac{1}{2}$				
	51 57		26 01 $\frac{1}{2}$	64 20	67 0 $\frac{1}{4}$	30,03	72 $\frac{1}{3}$	210 43	☾ and α Aquilæ, West of her.
	53 5			64 04 $\frac{1}{2}$	67 0 $\frac{1}{4}$				
	54 9			63 49 $\frac{3}{4}$	67 1				
	55 19			63 33 $\frac{3}{4}$	67 1 $\frac{1}{4}$				
20	15 31			58 58 $\frac{3}{4}$	67 8				
	16 45			58 40 $\frac{1}{2}$	8 $\frac{1}{2}$				
	18 14		27 42 $\frac{1}{4}$	58 20 $\frac{1}{2}$	9	30,03	72 $\frac{1}{3}$	210 48 27	☾ and α Aquilæ, West of her.
	19 5			58 10	9 $\frac{1}{2}$				
	20 1			57 56	10				
	21 0			57 42	10 $\frac{3}{4}$				
				— 21 $\frac{1}{2}$ "	+ 2' 19"	Errors of the Quadrant.			
	9 54		52 20 U. L.	72 0 L. L.	42 55 $\frac{1}{4}$				
	12 9		51 53 $\frac{3}{4}$	72 02	54 $\frac{3}{4}$				
	13 30		51 40 $\frac{1}{4}$	72 0	54				
	15 44		51 21	71 58	53 $\frac{3}{4}$				
	16 35		51 05 $\frac{3}{4}$	71 55	54	30,03	86 $\frac{1}{2}$	209 59	☉ and ☾.
	17 54		50 52	71 49 $\frac{1}{2}$	53 $\frac{1}{2}$				
	19 3		50 38	71 46	53				
	20 23		50 24 $\frac{1}{2}$	71 42	52 $\frac{1}{2}$				
	21 54		50 7	71 38	51 $\frac{3}{4}$				
	23 5		49 55	71 36	51 $\frac{1}{2}$				
			— 21 $\frac{1}{2}$ "	+ 3' 0"	+ 2' 17"	Errors of the Quadrant.			
7	20 39 30			65 52 $\frac{1}{4}$ L. L.	78 37				
	40 35			65 38	38				
	41 36			65 24 $\frac{3}{4}$	38				
	42 40		30 31 $\frac{1}{3}$	65 9 $\frac{3}{8}$	38 $\frac{1}{4}$	30,03	71	211 0	☾ and α Aquilæ, West of her.
	43 36			64 57	38 $\frac{1}{2}$				
	44 40			64 43	38 $\frac{3}{4}$				
				— 21 $\frac{1}{2}$ "	+ 2' 57"	Errors of the Quadrant.			

In the preceding Observations, where the objects are the Moon and a Star, the Star's true zenith distance is put down as it was computed; and the Moon's zenith distance was observed with the Astronomical Quadrant, except in the Observations of the Moon's distance from α Aquilæ, on May 5th, where both zenith distances are computed. Where the objects are the Moon and Sun, the Sun's zenith distance was observed with the Astronomical Quadrant, and the Moon's altitude with a Hadley's Sextant. In every instance, the true time was got from that shewn by the Clock.

Observations on Point Venus, in Otaheite, Continued.

Observations for the Variation of the Compass.

1774.	Zenith Distance of the ☉'s L.	Azimuth of the ☉'s center.	Vari- ation East.	1774.	Zenith Distance of the ☉'s L.	Azimuth of the ☉'s center.	Vari- ation East.
♂ April 26.	73 24 40 U. L.	N. 64 37½ E.		♂ May 2.	81 27 10 L. L.	N. 64 40 E.	
	72 36 45	63 47½	5 15½		81 11 25	64 30	6 10½
	71 55 35	63 10			80 31 5	64 10	
♂ — 28.	74 55 20	N. 64 12½ E.		♂ — 4.	85 2 55 U. L.	N. 77 40 W.	
	73 56 55	63 22½	5 26		85 34 30	77 47½	5 57½
	73 17 40	63 17½			86 5 17	78 5	
♀ — 29.	75 9 8 L. L.	N. 74 40 W.		♀ — 6.	76 11 30 U. L.	N. 61 50 E.	
	75 47 7	74 52½	5 29½		75 45 55	61 40	5 23½
	76 24 8	75 12½			75 19 30	61 15	
	79 40 40	N. 64 55 E.		♂ — 7.	83 26 30 L. L.	N. 75 45 W.	
	78 44 50	64 30	6 0½		84 2 38	76 0	5 48
	78 25 0	64 15			84 29 40	76 17½	
	75 55 30 U. L.	N. 64 0 E.			82 43 0 L. L.	N. 62 25 E.	
	39 25	63 25	5 48½		81 56 0	63 0	6 25½
	21 05	63 15			80 55 55	62 50	
♂ — 30.	78 26 50 L. L.	N. 75 40 W.			Altit. ☉'s L. L.		
	79 20 12	76 0	5 26½				
	79 51 58	76 25					
	80 48 30 U. L.	N. 65 15 E.		♂ — 9.	3 6 15	N. 76 30 W.	
	80 13 30	65 10	5 49½		2 33 45	76 30	5 34½
	79 43 30	65 02½			2 8 30	76 40	
☉ May 1.	76 14 55 U. L.	N. 75 20 W.			7 33 30	N. 74 50 W.	
	76 40 5	75 15	5 57½		7 4 0	75 10	6 10½
	77 8 30	75 25			6 35 30	75 22½	
	80 29 35 L. L.	N. 64 37½ E.					
	79 53 0	64 25	5 49½				
	79 15 20	64 20					

1774.	Time of apparent Noon by Clock.	Syderial Time of apparent Noon.	Clock before Syderial Time.	Clock loses on Syderial Time.
	H " "	H " "	" " "	" " "
♂ April 23.	2 19 43,89	2 2 15,76	17 28,13	
♂ — 26.	2 26 55,03	2 13 31,18	13 23,85	21,43
♀ — 27.	2 29 19,91	2 17 17,39	12 2,52	21,33
♀ — 29.	2 34 03,57	2 24 51,21	9 12,36	25,08
♂ — 30.	2 36 28,90	2 28 38,91	7 49,99	22,37
☉ May 1.	2 37 54,68	2 32 27,21	5 27,47	22,52
♂ — 3.	2 42 46,73	2 40 05,42	2 41,31	23,08
♂ — 4.	2 45 14,18	2 43 55,37	1 18,81	22,50
			Clock flow.	22,91
♀ — 6.	2 50 10,05	2 51 37,07	1 27,02	22,61
♂ — 7.	2 52 39,15	2 55 28,78	2 49,63	23,06
☉ — 8.	2 55 08,38	2 59 21,07	4 12,69	22,03
♂ — 9.	2 57 39,25	3 3 13,97	5 34,72	
Mean (rejecting the 30th of April) is				22,64

As I had reason, when I went on shore at this place, to think I should not stay above two or three days, the Clock was first set up in the ship's tent; but on the 28th of April, finding that I was likely to stay longer, and that the Clock was liable to be disturbed, I removed the ship's tent, and erected the Observatory over the Clock as it stood.

* The Clock seems here to have stopped exactly one minute: I know not how to account for it, as I never left either the case or face of the Clock unlocked.

By taking the first and last day's Observations, the Clock's loss is 1' 22",68

Observations on Point Venus, in Otaheite, Continued.

Computations of the Rate which Mr. Kendall's Watch went at.

1774.	Time of apparent Noon by the Clock.	Time by Clock when the Watch was compared.	Time past Noon by the Clock.	Clock's gain on the Watch.	Time past Noon by the Watch.	Time by the Watch when compared.	Time of apparent Noon by the Watch.	Mean Time of apparent Noon.	Watch too slow for mean Time.	Watch gains on mean Time.
	H	H				H	H	H	H	
h April 23.	2 19 43,89	2 40 09,75	20 25,86	2,0	20 23,86	11 14	10 53 36,14	23 58 15,31	13 4 39,17	12,33
δ — 26.	2 26 55,03	5 5 31,50	158 36,47	15,59	158 20,88	13 32	10 53 39,12	23 57 41,30	13 4 2,18	12,40
g — 27.	2 29 19,91	2 40 40,01	11 20,09	1,12	11 18,97	11 05	10 53 41,12	23 57 30,90	13 3 49,78	12,60
q — 29.	2 34 03,57	2 44 17,50	10 13,93	1,0	10 12,93	11 04	10 53 47,07	23 57 11,65	13 3 24,58	12,92
h — 30.	2 36 28,90	2 44 38,50	8 9,60	0,80	8 8,80	11 02	10 53 51,20	23 57 2,86	13 3 11,66	10,93
⊙ May 1.	2 37 54,68	2 45 01,50	7 6,82	0,70	7 6,12	11 01	10 53 53,88	23 56 54,61	13 3 0,73	11,30
δ — 3.	2 42 46,73	2 49 45,77	6 59,04	0,69	6 58,35	11 01	10 54 01,65	23 56 39,78	13 2 38,13	12,36
g — 4.	2 45 14,18	2 53 07,50	7 53,32	0,77	7 52,55	11 02	10 54 07,45	23 56 33,22	13 2 25,77	11,17
q — 6.	2 50 10,05	2 55 52,25	5 42,20	0,56	5 41,66	11 01	10 54 18,34	23 56 21,78	13 2 3,44	10,46
h — 7.	2 52 39,15	2 58 15,75	5 36,60	0,55	5 36,05	11 01	10 54 23,95	23 56 16,93	13 1 52,98	13,07
⊙ — 8.	2 55 08,38	3 4 36,50	9 28,12	0,93	9 27,19	11 04	10 54 32,81	23 56 12,72	13 1 39,91	10,36
⊙ — 9.	2 57 39,25	3 6 0,50	8 21,25	0,82	8 20,43	11 03	10 54 39,57	23 56 9,13	13 1 29,56	

The mean is 11,81

If the first and last Comparison be taken, the gain of the Watch will be 11",85; by a mean of all the Observations of equal altitudes taken by the Watch, its gain is 11",72; but the first and last day's Observation gives 11",95, and the mean of the four is 11",833.

Computations for the Latitude of the Place.

1774.	Latitude by		Declination.
	Interior Arch.	Exterior Arch.	
	0	0	0
By Observations of the Sun.			
g May 4.	17 29 3	17 29 10 $\frac{1}{2}$	15 53 27 N.
u — 5.	17 29 9	17 29 25 $\frac{1}{2}$	16 10 46
q — 6.	17 28 38	17 28 34 $\frac{3}{4}$	16 27 49
h — 7.	17 28 55 $\frac{1}{2}$	17 29 11 $\frac{3}{4}$	16 44 36
⊙ — 9.	17 29 0 $\frac{1}{2}$	17 29 08	17 17 19 $\frac{1}{2}$
	17 28 57 $\frac{1}{2}$	17 29 6	Mean.
By Observations of α Cygni.			
u May 5.	17 29 4 $\frac{3}{4}$	17 29 6	44 28 46 $\frac{1}{4}$ N.
q — 6.	17 29 11 $\frac{3}{4}$	17 29 16 $\frac{1}{2}$	
h — 7.	17 29 20	17 29 24 $\frac{3}{4}$	
	17 29 12 $\frac{1}{2}$	17 29 15 $\frac{3}{4}$	Mean.
By Observations of Regulus.			
h May 7.	17 29 17 $\frac{1}{2}$	17 29 29 $\frac{3}{4}$	13 3 43 $\frac{3}{4}$
⊙ — 9.	17 29 9 $\frac{1}{2}$	17 29 20	
δ — 10.	17 29 3 $\frac{2}{3}$	17 28 57 $\frac{3}{4}$	
	17 29 40 $\frac{1}{2}$	17 29 15 $\frac{3}{4}$	Mean.
By Observations of γ Leonis.			
⊙ May 9.	17 29 3 $\frac{1}{2}$	17 29 20 $\frac{1}{2}$	20 58 32 $\frac{3}{4}$
δ — 10.	17 29 0 $\frac{1}{2}$	17 29 25	
	17 29 01 $\frac{3}{4}$	17 29 22 $\frac{3}{4}$	
	17 29 5 $\frac{1}{2}$	17 29 15	Mean of the northern stars.

1774.	Latitude by the		Declination.
	Interior Arch.	Exterior Arch.	
	0	0	0
By Observations of α Pavonis.			
u May 5.	17 29 49	17 29 29	57 25 53 $\frac{1}{3}$ S.
q — 6.	17 29 34	17 29 17	
h — 7.	17 29 32	17 29 11	
	17 29 38 $\frac{1}{2}$	17 29 19	Mean.
By Observations of β Navis.			
h May 7.	17 29 58 $\frac{3}{4}$	17 29 36 $\frac{1}{2}$	68 47 51 $\frac{1}{2}$ S.
⊙ — 9.	17 29 40 $\frac{1}{2}$	17 29 14 $\frac{1}{2}$	
	17 29 49 $\frac{1}{8}$	17 29 25 $\frac{1}{2}$	
			Mean.
By an Observation of Antares.			
⊙ May 9.	17 29 45 $\frac{1}{2}$	17 29 31 $\frac{1}{2}$	25 54 26.7
	17 29 44 $\frac{1}{2}$	17 29 25 $\frac{1}{4}$	Mean of all the southern stars
	17 29 5 $\frac{1}{2}$	17 29 15	Mean of all the northern stars.
	17 29 24 $\frac{3}{4}$	17 29 20 $\frac{1}{8}$	
	17 29 22 $\frac{1}{2}$		Mean of the two arches.
	17 29 13 $\frac{3}{4}$		Mean last year.
	17 29 15		Mean of Mr. Green's Observations.
	17 29 17S.		Latitude of Point Venus.

Observations on Point Venus, in Otaheite, Continued.

Observations on the Tides.

The very inconsiderable height to which the Tides rise here, according to the Observations of Mr. Green and Captain Cook, in the year 1769, surprised most persons who had considered these matters, as being very far short, indeed, of what might have been expected from theory: There appeared, however, no reason to suspect the Observations, and I was rather inclined to doubt my senses, on seeing indications of much higher Tides than these Observations would admit of, when we arrived in Oaitipeha Bay, which lies on the N. W. side of the lesser peninsula of Otaheite. Repeated Observation, however, although I had no opportunity of making any real experiments for the purpose, had so far convinced me of the truth of it before we left the place, that I went on shore at Point Venus in full confidence of proving, by experiment, that some error had happened in the Observations made by the abovementioned Gentlemen. My disappointment will therefore be easily imagined, on finding the Observations (see p. 56.) correspond so nearly with theirs as not to differ more than three or four inches. Indeed it was scarcely possible for either of us to mistake much, as the water is generally so smooth within the reef which surrounds the Point, as to make one inch in the height of the water a very perceptible quantity.

So near an agreement amongst the Observations of four persons, our short stay at the place, and the attention which it was necessary for me to pay to other matters, might all contribute to make me rest, at this time, contented with the fact, as is but too often done, without enquiring into the cause of it; but on our arrival at Ulietea, finding that the highest Tides did not exceed seven or eight inches, I was again led to consider the matter, and the circumstances which might occasion it. The extent of the reef here, and the prodigious sea which broke over it, could not but attract my notice. It was the most tremendous sight I ever saw, especially when warping in, through a gap in this dreadful surf, which was scarce a cable's length wide, and against a rapid current. It readily occurred to all of us that this current was caused by the vast body of water which was thrown over the reef into the space between it and the island by the sea, as it was obvious it had no other way out again; but I did not think of applying this circumstance to the solution of the Problem which had so often puzzled me, until I found the Tides rise so much less here than they did, even at Otaheite, and that the current which we had found to oppose our entrance, ran also against the Tide of Flood, which was then making. It was obvious, from the former of these circumstances, that, let the cause be what it would, it must be greater here than there; and from the second, that the waters within the reef must be continually higher than without; and that of course, the Tide of Flood must have made considerably before it could at all influence the height of the water within; and if this difference of the heights of the water within and without was any thing considerable, a Tide of two or three feet, which is all I ever experienced at any small island in this ocean, would scarce affect it at all. It will moreover be obvious to every one who compares the annexed Map of Point Venus, and the reef surrounding it, which is laid down with the utmost accuracy, with Captain Cook's Map of the west side of Ulietea, (see Hawksworth's account of his voyage in the Endeavour) which also is exceeding accurate, that this cause must here be much greater than at Point Venus, as

Observations on Point Venus, in Otaheite, Continued.

Observations on the Tides.

the reef is not only of much greater extent, and of course the quantity of water thrown over greater, but also as there is only one opening, instead of two, for the discharge of the water that is thrown over. I may add likewise that the surf is, from whatever cause it may happen, generally much greater at Ulietea than at Otaheite. It is moreover evident, that if this be the cause, the Tides will be more sensible in or near the openings than farther within the reef; and so it appears to be from the Observations: for Captain Cook and Mr. Green tried them at the point A in the Map, and had only 10 or 12 inches at the Spring-tides. Mr. Bayley and myself tried them at the point B, and had 14 or 15 inches, a day or two before the change; and lastly, I founded across from the Observatory to the rock marked C in the Map, at high water, and had between seven and eight feet water, and yet many of our people walked across it at low water to gather shells on the rock.

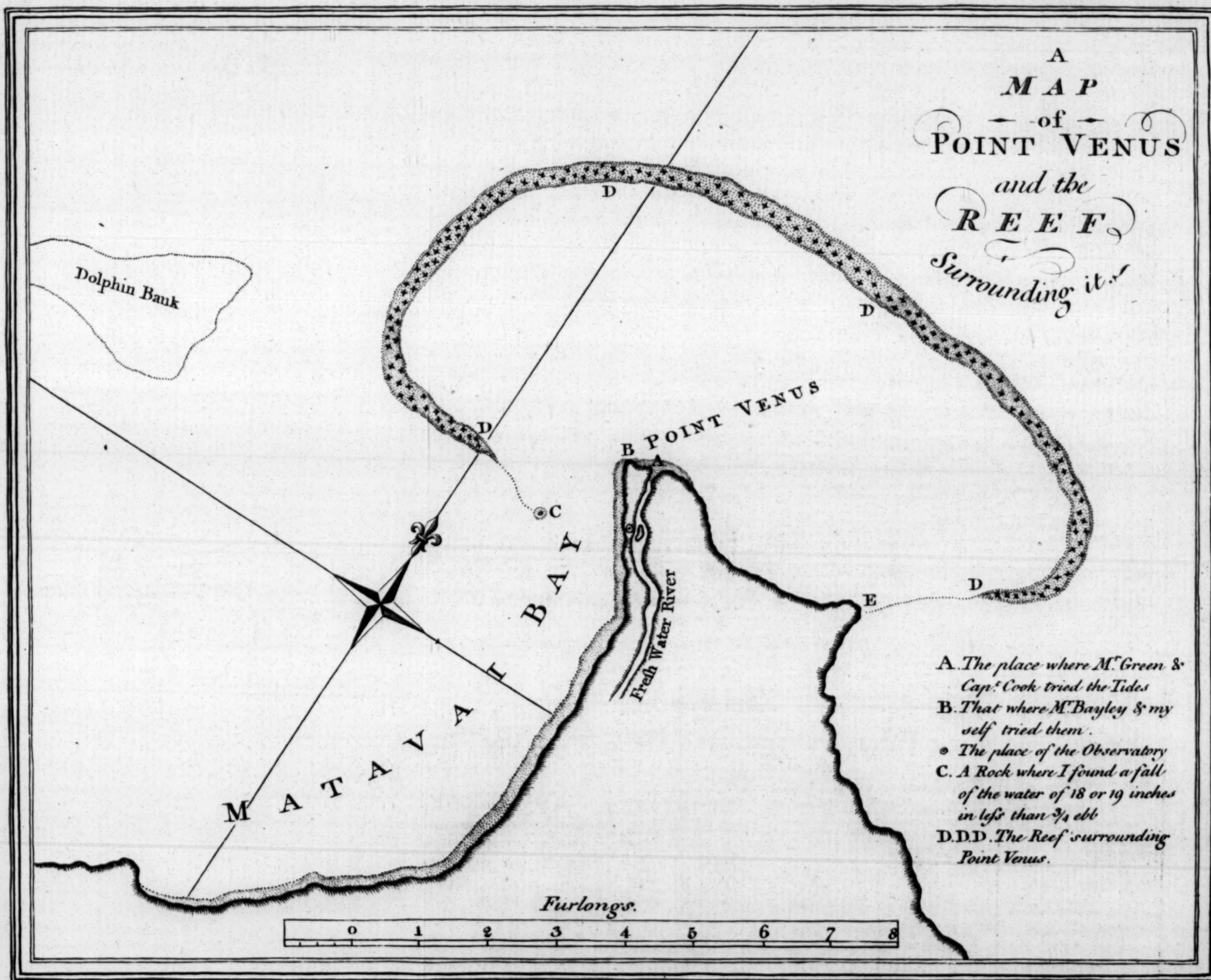
These were all the Experiments I was able to make for elucidating this affair, although I landed on Point Venus the second time, with a determined resolution to make some Experiments that might be decisive: But, after examining the coast both ways, as far as my other business would permit me to go, I found no place which was not sheltered by the reef in the same manner that Point Venus is, and of course liable to the same objections, or on which a surf did not break so great as to render it totally impossible to make any observations that would turn to the least account.

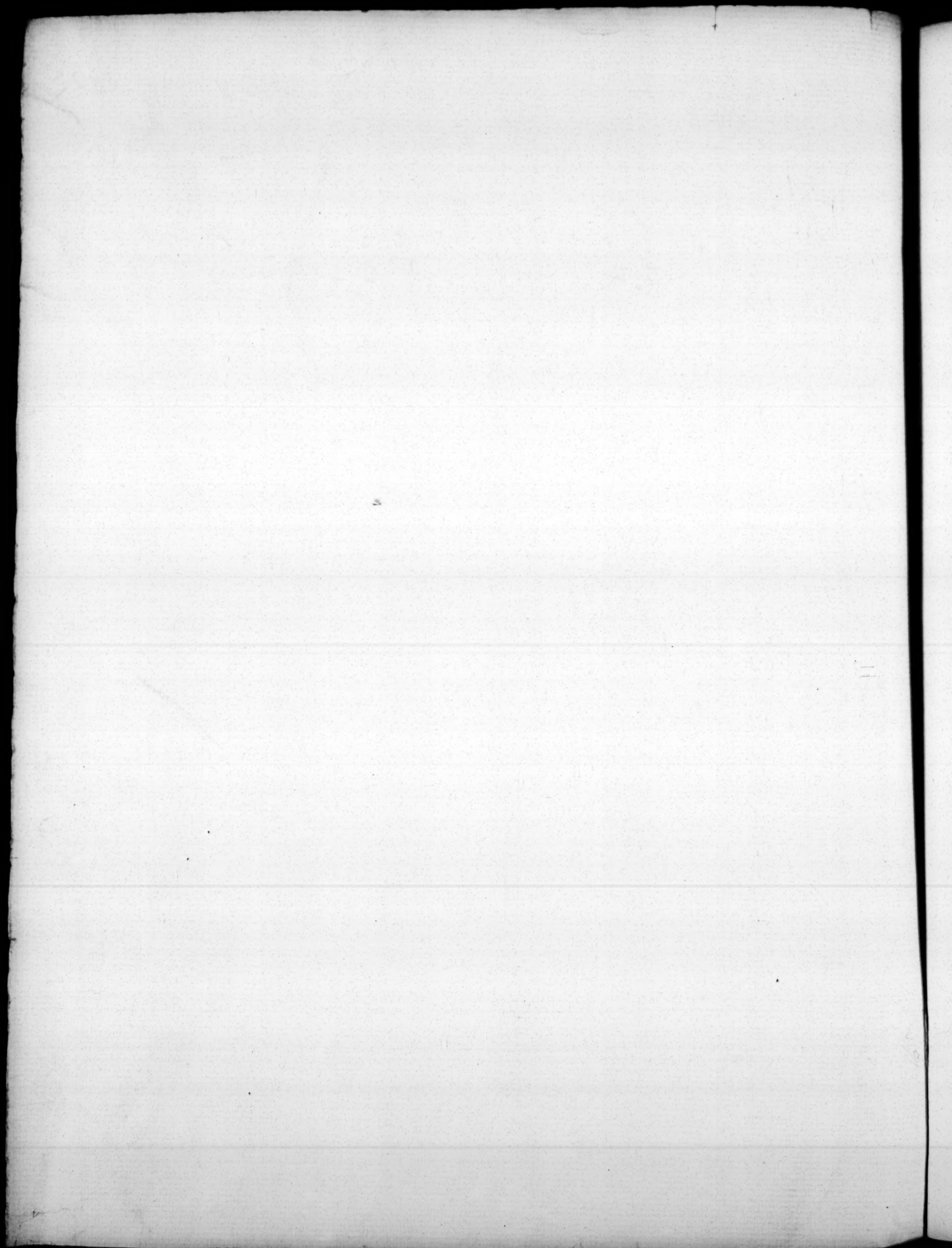
On the whole, I give it as my opinion, from the fullest conviction that the matter would allow of, that the absolute height of the Tides is the same as it is in other parts of this widely extended ocean, viz. about three feet at the highest Spring-tides, and about two feet at the neaps.

Observations on the Tides at Ohamaneno Harbour, in the Island of Ulietea.

1774.	Apparent Time.		Height of the Tides.		Remarks.	
	H	M	F.	I.		
8 May 25.	23	10	—	—	High Water.	The times of high and low water must not be too much relied on, as the small, and very slow rise of the water rendered it impossible to determine them with any accuracy: But the different heights of the water admitted of the most exact determination; the water having not the least motion at any time, so that one eighth of an inch was very discernible, and I am fully persuaded, from thence, that none of the numbers in the third column can err one-fourth of an inch.
4 — 26.	0	0	0	8 $\frac{1}{4}$	High Water.	
2 — 27.	19	0	—	—	Low Water.	
12 — 28.	1	0	0	7 $\frac{3}{4}$	High Water.	
	20	30	—	—	Low Water.	
0 — 29.	1	55	0	7 $\frac{1}{2}$	High Water.	
	21	0	—	—	Low Water.	
10 — 30.	2	30	0	7 $\frac{1}{2}$	High Water.	
	21	30	—	—	Low Water.	
8 — 31.	3	30	0	7 $\frac{1}{2}$	High Water.	

A
MAP
— of —
POINT VENUS
and the
REEF
Surrounding it.





Observations at the Island of Tanna, one of the New Hebrides.

1774.	Equal Altitudes. Times by the Watch K.			Zenith Distances.	Time of apparent Noon by the Watch.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
		H			H	
h August 6.	43 36 46 52	9 46 16½ 49 33½	48 57 52 16½	48 0 0		☉'s U. L. } Easterly. ☉'s L. L. }
☉ — 7.	6 58½ 10 12½	14 4 16 7 34	1 34: 4 55	48 0 0	11 56 48,2	☉'s L. L. } Westerly. ☉'s U. L. }
☿ — 10.	6 54 12 54: 15 48:	9 6 24½ 9 13 9 15 17½ 18 10	8 43 11 32½ 17 39: 20 31½	54 20 0 52 40 0		☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
♃ — 11.	38 40½ 41 35 47 36½	14 — 14 39 12 14 45 17 48 8	33 56 36 51½ 42 59 45 49½	52 40 0 54 20 0	11 57 8,16	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. }
	41 48 44 56	9 44 23	46 58 50 9	47 20 0		☉'s U. L. } Easterly. ☉'s L. L. }
♀ — 12.	12 54	14 7 5½	7 42	47 20 0	11 57 13,42	☉'s L. L. } Westerly. ☉'s U. L. }
☉ — 14.	28 5 36 17: 39 21	9 27 33 9 30 31 9 38 50	30 0	49 40 0 47 40 0		☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
♂ — 15.	15 40 18 41 26 55 29 50	14 13 08 16 14 14 24 29 27 24	10 39½ 13 44½ 22 4 25 2	47 40 0 49 40 0	11 57 23,29	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. }
♂ — 16.	8 54 11 40 17 38 20 29	9 11 10 13 58 9 19 58 22 49	13 27 16 15 22 17 25 10	52 20 0 50 40 0		☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
☿ — 17.	34 40 37 31 43 29½ 46 16	14 32 19½ 35 11 14 41 11 44 0	30 0 32 53 38 53½ 41 44	50 40 0 52 20 0	11 57 27,58	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. }
♃ — 18.	12 4 14 51	9 14 21 17 8	16 37 19 26	51 20 0		☉'s U. L. } Easterly. ☉'s L. L. }
♀ — 19.	40 27 43 13½	14 38 10 40 56	38 41½	51 20 0	11 57 31,72	☉'s L. L. } Westerly. ☉'s U. L. }

Observations at the Island of Tanna, one of the New Hebrides, Continued.

Observations for the Variation of the
Compass.

1774.	Time by the Watch K.			Azimuth of the ☉'s Cen- ter.	Vari- ation East.
	H	M	S		
☉ August 8.	6	41	17	N. 65 10 E.	6 7
		43	1	65 0	
		44	51½	64 30	
		46	42	64 35	
☽ — 9.	16	43	40½	N. 75 55 W.	6 49½
		44	52½	75 25	
		46	10	74 55	
		47	11½	75 52½	
☉ — 14.	7	48	18	N. 58 0 E.	8 4½
		48	37	57 40	
		48	56	58 0	
☽ — 15.	6	42	18	N. 65 45 E.	7 35½
		44	45	65 40	
		45	26	64 35	
☽ — 18.	6	44	15	N. 66 0 E.	7 34½
		45	13	66 02½	
		46	40½	66 25	

Observations for the Dip of the Needle.

1774.	Face of the Instrument.	
	East.	West.
☉ August 7.	44 25	45 05
	43 05	46 30
	Changed the Poles.	
	42 45	45 50
	44 0	46 30
	Changed the Poles.	
	44 45	46 30
	44 35	44 20
	44 30	45 25
☽ — 17.	44 40	45 50
	45 0	43 10
	Changed the Poles.	
	46 05	44 30
	44 15	43 35
	44 55	43 05
	Changed the Poles.	
	45 25	45 35
	46 10	46 40
	Changed the Poles.	
	45 45	45 10
	46 45	45 0
	45 15	45 50
Mean	45 02½	Dip of the Needle's S. end.

Observations at the Island of Tanna, one of the New Hebrides, Continued.

Lunar Observations for the Longitude.

1774.	Time by the Watch K.		Apparent Time.	Zenith Distance of the ν 's U. L.	Distance of the ν 's L. from $\odot$ or $\ast$.	Error of the Quadrant.	Longitude East.	Remarks.	
	H	"		"	"				"
ν Aug. 15.	14	40 22 $\frac{1}{2}$		46 22 $\frac{1}{2}$	92 6	+1 16	170 12 0	$\odot$ and ν 's Limbs. Barometer 29,97. Thermometer 81 $\frac{1}{4}$. Dollond's Quadrant.	
		41 58		46 0 $\frac{3}{4}$	6 $\frac{1}{2}$				
		43 20 $\frac{1}{2}$		45 42 $\frac{1}{4}$	6 $\frac{1}{2}$				
		44 44		45 21	6 $\frac{3}{4}$				
		47 54 $\frac{1}{2}$		44 39	8 $\frac{3}{4}$				
		49 05		44 22 $\frac{1}{2}$	9				
		50 31		44 2 $\frac{1}{2}$	10	+1 58 $\frac{1}{2}$	169 42 37	$\odot$ and ν . Barometer 29,97. Thermometer 81 $\frac{1}{4}$. Ramsden's Quad.	
	14	53 9		43 29 $\frac{1}{4}$	92 11				
		54 41		43 7 $\frac{1}{2}$	11 $\frac{3}{4}$				
		55 46		42 52	11 $\frac{3}{4}$				
		56 45		42 38 $\frac{1}{2}$	12				
		58 8		42 19 $\frac{1}{4}$	12 $\frac{3}{4}$				
		59 32		41 59 $\frac{1}{4}$	13 $\frac{1}{2}$	+1 20	169 35 38	ν and Spica. Barometer 30,08. Thermometer 81. Cloudy.	
	18	32 39			36 6 $\frac{3}{4}$				
		35 2			8 $\frac{3}{4}$				
		35 51			8				
		38 39			9 $\frac{3}{4}$				
		39 4 $\frac{1}{2}$			9				
	18	47 52			63 28	+1 20	169 40 37	ν and α Aquilæ. Barometer 30,08. Thermometer 81. Very cloudy.	
		48 45			27 $\frac{3}{4}$				
		50 57			26 $\frac{3}{4}$				
		52 37			26 $\frac{1}{2}$				
	$\ast$ — 17.	15	21 26		62 6 $\frac{1}{2}$	119 10 $\frac{3}{4}$	+1 47 $\frac{1}{2}$	169 53 15	$\odot$ and ν . Barometer 30,07. Thermometer 79 $\frac{1}{2}$. Ramsden's Quad.
			24 3 $\frac{1}{2}$		61 33 $\frac{1}{2}$	12 $\frac{1}{4}$			
		25 9		61 18 $\frac{3}{4}$	12 $\frac{3}{4}$				
		26 20		61 2 $\frac{3}{4}$	13 $\frac{1}{2}$				
		27 18		60 45 $\frac{1}{2}$	14				
		28 52		60 28	14 $\frac{1}{4}$				
		29 52 $\frac{1}{2}$		60 13 $\frac{1}{2}$	15				
		30 56		60 0 $\frac{1}{2}$	15 $\frac{1}{4}$				
		31 45		59 48 $\frac{3}{4}$	16				
		32 52		59 33 $\frac{1}{2}$	16 $\frac{1}{2}$				
							169 48 49 $\frac{1}{2}$	Mean of all.	

Observations made at the Island of Tanna, one of the New Hebrides.

Observations on the Tides.

1774.	Appa- rent Time.	Height of the Tide.	Remarks.	1774.	Appa- rent Time.	Height of the Tide.	Remarks.
	H	F. l.			H	F. l.	
1/2 August 6.	4 48		Time of high water, estimated.	1/2 August 18.	5 58		Water returned to the first mark.
	22 14		The water at a mark.		21 30		Low water by estimation.
	23 42		Low water, by equal altitudes.	2 — 19.	2 10		The water at a mark.
☉ — 7.	1 10		The water returned to the mark.		2 30		The water at a second mark.
☽ — 17.	5 47	3 0	High water by estimation.		3 50 1/4	3 5	High water by equal altitudes.
	20 43		Low water by estimation.		5 15		Water returned to the latter mark.
	23 48		The water at a mark.		5 25		Water returned to the first mark.
1/4 — 18.	0 17		The water at another mark.				
	2 55	3 01	High water, by equal altitudes.				
	5 37		Water returned to the latter mark.				

The high and low waters were marked on a post, and the distance between these marks measured with a two feet rule.

Computations of the going of Mr. Kendall's Watch.

1774.	Time of ap- parent Noon by the Watch.	Mean Time of apparent Noon.	Watch too slow for mean Time.	Watch gains between the Ob- serva- tions.	Watch gains each Day.
	H	H	H		
☉ August 7.	11 56 48,2	24 5 23,23	12 8 35,03	0 51,55	12,89
1/4 — 11.	11 57 08,16	4 51,64	7 43,48	0 14,58	14,58
☽ — 12.	11 57 13,42	4 42,32	7 28,90	0 41,37	13,79
☽ — 15.	11 57 23,29	4 10,82	6 47,53	0 27,97	13,98
☽ — 17.	11 57 27,58	3 47,14	6 19,56	0 30,07	15,03
☽ — 19.	11 57 31,72	3 21,21	5 49,49		
			Mean		14,054

If the gain between the first and last Observation be taken, and divided by the number of days elapsed, the daily gain of the Watch on mean time will be $13''$,795: but if a mean of all the comparisons which can be formed out of the six day's Observations be taken, the daily gain on mean time will be $13''$,938.

Observations for the Latitude of the Place.

1774.	Double Altitude of the ☉'s L. L.			Latitude South.		
	°	'	"	°	'	"
☉ Aug. 7.	107	24	0	19	32	18
☽ — 9.	108	31	30	19	32	33
☽ — 10.	109	7	10	19	32	7
1/4 — 11.	109	41	52	19	32	25
☽ — 12.	110	17	8:	19	32	41
☽ — 15.	113	11	0	19	32	29
☽ — 16.	113	48	45	19	32	25 1/2
			Mean Latitude	19	32	25 1/2 South.

ASTRONOMICAL OBSERVATIONS.

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Observations made on the Island Pudyoua, on the Coast of New Caledonia.

1774.	Equal Altitudes. Times by the Watch K.			Zenith Dis- tance.	Altitude of the ☉'s L. L. on the Meridian.	Time of appa- rent Noon by the Watch.	Remarks, &c.
	Lower Wire.	Middle Wire.	Upper Wire.				
	H	H	H				
Sept. 5.	23 11 $\frac{1}{2}$	9 25 19 $\frac{1}{2}$	27 26	49 40			☉'s U. L. } Easterly. ☉'s L. L. }
6.	25 48	27 54	30 01				
		15 5 43	6 12 $\frac{1}{2}$	49 40	62 59 $\frac{1}{2}$	12 16 41,9	Height of the eye 10 feet. ☉'s L. L. } Westerly. ☉'s U. L. }
	10 26	8 21					

Observations of the Solar Eclipse.

At 13 h. 11' 47" by the Watch, I had a short sight of the Sun between the clouds, and saw that the Eclipse had begun: It remained cloudy until a little before two o'clock, when it cleared up, and I took the following measurements with my Hadley's Sextant, which I think may be advantageously made use of on these occasions.

1774.	Time by the Watch K.		Apparent Time.	Distance of the Cusps. After Before		Distance &c. re- duced.		1774.	Time by the Watch K.		Apparent Time.	Distance of the Cusps. After Before		Distance &c. re- duced.	
	H	M		O.	O.				H	M		O.	O.		
	H			O.					H			O.			
♂ Sept. 6.	14	10 28	1 53 45 $\frac{1}{2}$	27 $\frac{1}{4}$		26 54		♂ Sept. 6.	14	49 54	2 33 11 $\frac{1}{2}$		24 $\frac{1}{4}$	24 36	
		13 31	1 56 48 $\frac{1}{2}$	27 $\frac{1}{2}$		27 9				53 7	2 36 24 $\frac{1}{2}$		24	24 21	
		15 57	1 59 14 $\frac{1}{2}$		26 $\frac{1}{4}$	26 36				54 30	2 37 47 $\frac{1}{2}$		24 $\frac{1}{4}$	24 36	
		17 19	2 0 36 $\frac{1}{2}$		26 $\frac{3}{4}$	27 6			15	11 53	2 55 10 $\frac{1}{4}$	23 $\frac{3}{4}$		23 24	
		22 50	2 6 7 $\frac{1}{2}$		26 $\frac{1}{2}$	26 51				12 50	2 56 7 $\frac{1}{4}$		22 $\frac{1}{4}$	22 36	
		23 45	2 7 2 $\frac{1}{2}$		26	26 21				13 29	2 56 46 $\frac{1}{4}$		22 $\frac{1}{2}$	22 51	
		24 33	2 7 50 $\frac{1}{2}$		26	26 21				14 9	2 57 26 $\frac{1}{4}$	22		21 40	
		25 41	2 8 58 $\frac{1}{2}$	26 $\frac{1}{4}$		25 54				14 39	2 57 56 $\frac{1}{4}$	21 $\frac{3}{4}$		21 24	
		26 29	2 9 46 $\frac{1}{2}$	26 $\frac{1}{4}$		25 54				15 31	2 58 48 $\frac{1}{4}$		21 $\frac{1}{2}$	21 51	
		27 15	2 10 32 $\frac{1}{2}$	26 $\frac{1}{2}$		26 9						32 $\frac{1}{4}$	31 $\frac{1}{2}$	32 0 $\frac{1}{2}$	
		28 22	2 11 39 $\frac{1}{2}$	26		25 39						32 $\frac{1}{2}$	31 $\frac{3}{4}$		
				32	31 $\frac{3}{4}$	31 57 $\frac{1}{2}$						32 $\frac{1}{2}$	31 $\frac{1}{2}$		
				32 $\frac{1}{4}$	31 $\frac{1}{4}$							32 $\frac{1}{2}$	31 $\frac{1}{2}$		
			The Sun's diameter.	32 $\frac{1}{4}$	31 $\frac{1}{4}$				15	22 14	3 5 31 $\frac{1}{4}$	21		20 39	
	14	34 21	2 17 38 $\frac{1}{2}$	25 $\frac{1}{4}$		25 24				23 36	3 6 53 $\frac{1}{4}$	20 $\frac{1}{2}$		20 9	
		35 7	18 24 $\frac{1}{2}$	25 $\frac{1}{2}$		25 9				25 59	3 9 16 $\frac{1}{4}$		20 $\frac{1}{2}$	20 51	
		35 39	18 56 $\frac{1}{2}$	25 $\frac{1}{2}$		25 9				27 25	3 10 42 $\frac{1}{4}$		19 $\frac{3}{4}$	20 6	

Observations made on the Island of Pudyoua, on the Coast of New Caledonia, Continued.

Observations of the Solar Eclipse.

1774.	Time by the Watch K.	Apparent Time.	Lucid Part.		Parts, &c. reduced.	1774.	Time by the Watch K.	Apparent Time.	☉'s Dia- meter.		Reduc- ed.
			After	Before					After	Before	
	H	H.	O	O					O	O	
8 Sept. 6.	15 29 01	3 12 18 $\frac{1}{4}$		26 $\frac{1}{2}$	26 51	After the Eclipse.			32 $\frac{1}{4}$	31 $\frac{3}{4}$	32 0
	30 13	3 13 30 $\frac{1}{4}$		27 $\frac{1}{4}$	27 36				32	31 $\frac{3}{4}$	31 52 $\frac{1}{2}$
	30 50	3 14 7 $\frac{1}{4}$	28 $\frac{1}{2}$		27 54				32 $\frac{1}{4}$	31 $\frac{1}{2}$	31 52 $\frac{1}{2}$
	31 42	3 14 59 $\frac{1}{4}$	28 $\frac{1}{4}$		27 54				32 $\frac{1}{2}$	31 $\frac{1}{2}$	32 0
	32 34	3 15 51 $\frac{1}{4}$	29		28 40				32 $\frac{1}{2}$	31 $\frac{1}{2}$	32 0
	33 9	3 16 26 $\frac{1}{4}$	29 $\frac{1}{4}$		28 54				32 $\frac{1}{2}$	31 $\frac{1}{2}$	32 0
	33 52	3 17 09 $\frac{1}{4}$		28 $\frac{1}{4}$	28 36		W. W.	15 45 32	3 28 49 $\frac{1}{4}$		
	34 27	3 17 44 $\frac{1}{4}$		28 $\frac{1}{2}$	28 51		Mr. Clerke.	45 35	52 $\frac{1}{4}$		
	35 3	3 18 20 $\frac{1}{4}$		29	29 21		Capt. Cook.	45 36	53 $\frac{1}{4}$		
									End of the Eclipse.		

As the cusps approach each other the fastest towards the end of the Eclipse, it would certainly have been best to continue measuring their distance to the end, if it could have been done with exactness; but I found that when they began to grow very obtuse, it was not easy to determine their coincidence, at least with so small a magnifying power as is generally used with Hadley's quadrant: If a micrometer on the same principles with Hadley's quadrant was applied to a proper telescope, which I think might be done with some advantage, this defect might probably vanish; as things are, I think it would be best always to measure the parts uneclipsed.

Of the Tides.

The distance which we lay from the shore, and the difficulty of getting thither, would not permit me to make a regular series of Observations on the Tides; but I found by equal altitudes of the water, that it was low water at the island where I observed the eclipse at 18' past noon of the 6th; and, as near as I could estimate, it was high water on the shore opposite the ship, at half past six o'clock the next morning. At 58' past noon on the 7th it was low water; but I could determine nothing with respect to the quantity it had ebbed, as the natives would not suffer any mark to stand on the shore, and there was no fixed object by which it could be done. The next morning I got the time of high water very accurately, by means of equal altitudes, at 19 h. 29', and found that it had flowed three feet and near an inch from yesterday's low water mark. At five or ten minutes past two o'clock on the 8th, it was low water, and I found that it had ebbed out from this morning's high water mark three feet and an inch nearly. These were all the remarks of this sort which I was able to make here.

Observations made on Board the Ship, at Anchor.

Observations of Meridian Altitudes for the Latitude.

1774.	Meridi- an Altitude of the ☉'s L. L.	Latitude.	Quadrant.	*** The great difference between the latitudes deduced from the three first Observations, as well as that made on the little island, on the 6th, and those deduced from the five last Observations, did not escape my notice at the time, nor did they pass without the strictest examination, as well as care, in the four last, so that I am certain no mistake has happened in them; and that no mistake has been committed in the former may reasonably be concluded, as they agreed exceeding near with those taken by Mr. Clerke and others on the little island. N. B. The small island, where I observed the Eclipse, bore S. 88 E. by compass, about a mile distant; that is, about S. 79° E. true: Of course the difference of latitude is about 11", whence the latitude of the island will be 20° 17' 59" S.
	° ' "	° ' "		
Sept. 7.	63 23 $\frac{1}{2}$	20 16 40	Ramsden.	
8.	63 45 $\frac{3}{4}$	20 16 52	Dollond.	
9.	64 8 $\frac{5}{8}$	20 16 48	Ramsden.	
10.	64 29 $\frac{1}{2}$	20 18 20	Ramsden.	
11.	64 52 $\frac{3}{4}$	20 18 0	Ramsden.	
	64 52 $\frac{3}{4}$	20 18 30	Dollond.	
12.	65 14 $\frac{5}{8}$	20 18 45	Dollond.	
	65 15 $\frac{1}{4}$	20 18 30	Ramsden.	
Latitude		20 17 48	South.	

Observations for the Longitude by the Watch K.

1774.	Time by the Watch K.	Apparent Time.	Altitude of the ☉'s L. L.	Baro- meter.	Thermo- meters. A. B.	Longitude by the Watch.	No. of Ob- servations.	Remarks.
	H ' "	H ' "	° ' "			° ' "		
Sept. 5.	15 17 44 $\frac{1}{2}$	3 0 50,7	37 45 54	30,09	77 75 $\frac{1}{2}$	163 55 22 $\frac{1}{2}$	10	Cloudy.
6.	9 49 24 $\frac{2}{3}$	21 32 45 $\frac{1}{2}$	44 59 44	30,08	73 $\frac{1}{2}$ 72 $\frac{1}{2}$	163 56 37 $\frac{1}{2}$	6	
7.	7 13 4	18 56 36	11 0 10	30,04	73 $\frac{1}{2}$ 72 $\frac{1}{4}$	163 58 0	6	
8.	7 9 4 $\frac{1}{2}$	18 51 33 $\frac{1}{2}$	9 58 52	30,08	73 $\frac{1}{2}$ 74 $\frac{1}{4}$	163 55 45	6	
9.	7 54 14 $\frac{1}{2}$	19 37 54	20 43 41	30,09	73 $\frac{1}{2}$ 71	163 56 45	6	
10.	16 5 39	3 49 22,7	28 9 10	30,06	76 75	163 57 0	8	Dist.
	16 12 2 $\frac{1}{2}$	3 55 50	26 42 40	30,06	76 75	163 58 0	6	Dist.
	8 24 32	20 8 16	27 44 23	30,21	73 $\frac{3}{4}$ 72	163 56 7 $\frac{1}{2}$	10	
11.	15 21 21 $\frac{2}{3}$	3 5 10	38 1 9	30,08	74 $\frac{3}{4}$ 76 $\frac{1}{2}$	163 56 37 $\frac{1}{2}$	6	
	7 38 2 $\frac{1}{2}$	19 21 52	17 22 7 $\frac{1}{2}$	30,14	74 72 $\frac{3}{4}$	163 55 52 $\frac{1}{2}$	6	
	15 5 14 $\frac{1}{2}$	2 49 12	41 37 13 $\frac{1}{2}$	30,08	76 $\frac{1}{2}$ 79	163 57 15	8	Dist.
Mean of all						163 56 40 $\frac{1}{4}$	East.	

Observations made on Board the Ship, at Anchor.

Observations for the Variation of the Compass.

1774.	Altitude of the ☉'s L. L.	Azimuth of the ☉'s Cen- ter.	Variation East.	No. of Observat.	Remarks.
8 Sept. 7.	7 2 24	N. 73 3 E.	7 59½	5	Gregory's Compass; observed by Mr. Clerke.
	8 5 20	N. 72 22 E.	8 15	5	Gregory's Compass.
14 — 8.	6 0 10	N. 73 46 E.	7 42½	5	Gregory's Compass.
	8 24 22	N. 72 22 E.	8 30½	5	Knight's Compass.
8 — 9.	10 31 24	N. 71 3 E.	9 25	10	Knight's Compass.
10 — 11.	10 12 45	N. 72 3 E.	9 22½	10	Knight's Compass.
		Mean	8 32½		East.

This variation, as usual, is considerably less than any observed at sea for some time, both before and after we were at this place.

Lunar Observations for the Longitude.

1774.	Time by the Watch K.	Apparent Time.	Altitude of the ☉ or *	Moon's Al- titude.	Distance ☉'s Limb from ☉ or *.	Barom.	Therm.	Longi- tude East.	Remarks.
	H	H	°	°	°			°	
8 Sept. 9.	19 3 36½	6 47 11½	65 53½ tr.	27 4 tr.	42 17 30	30,08	71½	165 17½	{ ☉ and Antares, a mean of 7 Observations.
10.	16 5 39	3 49 22,7	28 9½ L. L.	76 29½ L. L.	50 4 22½	30,06	75	164 15½	{ ☉ and ☉, a mean of 8 Observations.
	16 12 2½	3 55 50	26 42½ L. L.	75 31 L. L.	50 6 22	30,06	75	164 13½	{ ☉ and ☉, a mean of 6 Observations.
☉ — 11.	19 4 54	6 48 43	19 6 tr.	52 32 tr.	32 48 28½	30,18	73	164 31½	{ ☉ and Spica, a mean of 8 Observations.
	19 25 58½	7 9 57½	56 27½	47 44½ tr.	66 23 17½	30,18	73	164 56½	{ ☉ and α Aquilæ, a mean of 6 Observations.
☉ — 12.	15 5 14	2 49 12	41 37½ L. L.		75 56 50	30,08	79	164 19½	{ ☉ and ☉, a mean of 8 Observations.
	15 13 44	2 57 42	39 47½ L. L.		75 59 36½	30,08	79	164 22½	{ ☉ and ☉, a mean of 8 Observations.
	19 9 34½	6 53 33	54 42½	54 34 tr.	54 16 10½	30,10	73½	165 40½	{ ☉ and α Aquilæ, a mean of 8 Obs. Cloudy.

As it frequently happened, that the altitude of one or both of the objects could not be observed for the land, I was obliged to compute them from the apparent time, deduced from the Watch; and such are here marked tr. The numbers put down are the true altitude of the center.

The mean of the above Observations give $164^{\circ} 42' 6''\frac{1}{2}$ for the Longitude of the ship. Twenty Observations taken before we arrived, and reduced hither by the Watch, give $164^{\circ} 45' 54''\frac{1}{2}$; and twenty taken after leaving the place, gave $164^{\circ} 32' 32''$: the mean of these three is $164^{\circ} 40' 11''$ E., the Longitude of the ship at anchor. The bearing and distance of the little island where I observed the eclipse, gives $1' 3''$ for the difference of Longitude between the ship and island, and of course the Longitude of the latter will be $164^{\circ} 41' 14''$ E.: but the Watch gave only $27''\frac{1}{2}$ difference of Longitude; and therefore if this be taken, its Longitude will be no more than $164^{\circ} 40' 38''\frac{1}{2}$ E. I should prefer the former.

Observations made at Queen Charlotte's Sound, in New Zealand.

1774.	Equal Altitudes. Times by the Clock B.			Zenith Distance.	Azimuth of ☉'s center from the North at the times of equal Altitudes.			Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.		Lower Wire.	Middle Wire.	Upper Wire.		
	H	H	H	°	°	°	°	H	
♀ Oct. 21.	19 21 22 14½ 33 06 36 41	9 21 40½ 24 36 11 35 59½ 39 44	24 1 26 56 38 54½ 42 34½	64 40 0 41 20 0					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
♂ — 22.								13 47 14,28	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
	1 42 12 39½ 15 36 6 48½ 9 49½ 52 1 55 11	15 55 7½ 58 50 18 10 18½ 13 15½ 10 9 15 12 14½ 10 54 34 57 46	52 11½ 55 57 7 58 10 55 11 39 14 38½ 57 7 0 20½	41 20 0 64 40 0 56 20 0 48 20 0					
☉ — 23.	46 41 49 51 32 04 45 03½ 38 18½ 41 16½	16 44 6½ 47 19 17 29 39 32 40½ 9 40 42 43 38½	44 46 27 16 30 17 43 3 46 59	48 20 0 56 20 0 62 0 0				13 50 45,29	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
D — 24.	7 47 10 45	18 8 23		62 0 0				13 54 19,11	☉'s L. L. } Very cloudy. ☉'s U. L. } Westerly.
♂ — 25.	39 28 42 25 52 02 54 58	9 41 49½ 44 45 9 54 23½ 57 19½	44 9 47 4½ 56 44 59 41	62 40 0 60 20 0	69 0 68 25 67 0 66 20	68 29 67 55 66 30 66 0	68 0 67 45 66 0		☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
♀ — 26.	8 23½ 11 21½ 20 58 23 53½	18 6 1½ 8 59 18 18 37½ 21 34	6 39 16 19 19 13	60 20 0 62 40 0	Varia. 94 45 95 15 97 30 97 50	14 20 94 25 94 40 96 50 97 30	East. 94 35 96 25 96 55	14 1 28,25	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
♂ — 27.	31 52½ 34 47½	9 34 13 37 7½ 9 46 42½ 49 37	36 32 39 27 49 1 51 57½	65 0 0 62 40 0	72 5 71 45 69 45 Varia.	71 50 71 25 69 50 13 59½	71 30 71 05 69 25 East.		☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
♀ — 28.	47 16 30 34½	49 37			69 45 Varia.	69 25 13 59½	69 0 East.	14 8 42,29	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
	43 2½ 45 58 55 27½ 58 22 7 58 10 54	18 28 13 18 31 8 18 40 40½ 43 36½ 9 57 47½ 10 0 42 10 10 19 13 15	38 24 41 17 0 7 3 2½ 12 39½ 15 35	62 40 0 65 0 0 62 0 0 59 40 0	97 50 99 35 100 20 70 55 70 15 68 15 68 0	97 15 99 20 99 45 70 20 70 05 68 5 67 50	96 55 99 10 99 30 70 05 69 45 68 0 67 15		☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. }
☉ — 30.	55 27½ 58 22 7 58 10 54	9 57 47½ 10 0 42 10 10 19 13 15	0 7 3 2½ 12 39½ 15 35	62 0 0 59 40 0	70 55 70 15 68 15 Varia.	70 20 70 05 68 5 14 18½	70 05 69 45 68 0 East.	14 19 36,89	☉'s U. L. } ☉'s L. L. } Westerly. ☉'s U. L. } ☉'s L. L. }
D — 31.	28 42½ 31 38½ 41 16½	18 26 22 29 18 18 41 50	24 2½ 26 59 36 34½ 39 29	59 40 0 62 0 0	96 45 97 15 99 0	96 0 96 55 99 5	95 40 96 5 98 30 98 45		☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. }

Observations made at Queen Charlotte's Sound, Continued.

1774.	Equal Altitudes. Times by the Clock B.			Zenith Distance.	Azimuth of ☉'s center from the North, at the times of equal Altitudes.			Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.		Lower Wire.	Middle Wire.	Upper Wire.		
		H						H	
8 Nov. 2.	6 45	10 9 6	11 24 :	61 20 0	71 35	71 20		14 30 37,10	☉'s U. L. }
	9 40½	12 0	14 20		71 20	71 0	70 50		☉'s L. L. } Easterly.
	19 13	10 21 34	23 53½		69 40	69 25	69 20		☉'s U. L. }
	22 10	24 30½	26 51		69 20	69 20	69 05		☉'s L. L. }
21 — 3.					Varia.	14 15	Eaft.		
	39 25½	18 37 5	34 45	59 0 0	97 45	97 25	97 0	14 34 18,45	☉'s L. L. }
	42 23	40 2½	37 43		98 10	97 50	97 30		☉'s U. L. } Westerly.
	51 56	18 49 36½	47 16½		100 25	99 30	99 10		☉'s L. L. }
	54 53	52 32	50 13½		100 35	100 25	99 35		☉'s U. L. }
	46 57½	10 49 20	51 40½	54 20 0	65 0	64 45	64 15	14 38 0,49	☉'s U. L. } Easterly.
	49 55½	52 18	54 39½		64 45	64 10	63 35		☉'s L. L. }
					Varia.	14 48½	Eaft.		
					94 30	93 30	93 15		☉'s L. L. }
2 — 4.	19 0	18 16 40	14 18	54 20 0	94 45	94 35	93 35	14 38 0,49	☉'s U. L. } Westerly.
	21 58½	19 37	17 17			75 0	74 35		☉'s U. L. }
		9 56 39	58 57½			74 30	74 15		☉'s L. L. } Easterly.
		59 33½	1 51½			69 15	69 05		☉'s U. L. }
	28 7½	10 30 29	32 48	58 20 0	69 35	69 15	69 05	14 38 0,49	☉'s L. L. }
	31 4½	33 25½	35 45		69 15	69 0	68 30		☉'s U. L. }
					Varia.	14 24½	Eaft.		☉'s L. L. }
					98 0	97 35	97 10		☉'s U. L. }
12 — 5.	45 17½	18 42 56½	40 38	58 20 0	98 25	98 05	97 40	14 38 0,49	☉'s L. L. } Westerly.
	48 13½	45 53 :	43 34			103 35	103 5		☉'s U. L. }
		19 16 51	14 32½			103 50	103 40		☉'s L. L. }
		19 46	17 27						☉'s U. L. }

*** The Observatory stood exactly in the place where it did last year, and where I observed the equal altitudes in May and June, 1773. The Clock also was fixed up in the usual manner, by means of the iron block and frame : but I had the mortification to find it so much injured by the dampness of the place it had lain in, and the parts, particularly the pendulum, so covered with rust, that it would not go without fresh oil, and an additional weight for the first day or two after it was set up.

Observations made at Queen Charlotte's Sound, Continued.

Computations of the Clock's Rate of going.

1774.	Time of apparent Noon by the Clock.		Syderial Time of apparent Noon.		Clock too fast for Syderial Time.	Clock loses between the Observations.	Clock loses each Day on Syderial Time.
	H	"	H	"			
h Oct. 22.	13	47 14,28	13	46 33,90	0 40,38		
o — 23.	13	50 45,29	13	50 21,80	0 23,49	16,89	16,89
D — 24.	13	54 19,11	13	54 10,70	0 08,41	15,08	15,08
					Clock slow.		
h — 26.	14	1 28,25	14	1 50,38	0 22,13	30,54	15,27
h — 28.	14	8 42,29	14	9 33,10	0 50,81	28,68	14,34
D — 31.	14	19 36,89	14	21 13,10	1 36,21	45,40	15,13
o Nov. 3.	14	30 37,10	14	33 0,37	2 23,27	47,06	15,69
h — 4.	14	34 18,45	14	36 57,78	2 39,33	16,06	16,06
h — 5.	14	38 0,49	14	40 56,01	2 55,52	16,19	16,19
					Mean		15,58

If the gain between the first and last Observation be taken, the Clock's gain on Syderial Time will be 15",42 each day.

The pendulum vibrated 1° 37' $\frac{1}{2}$ each way from the perpendicular the whole time.

Observations of Meridian Altitudes of the Sun and Stars for the Latitude.

1774.	Zenith Distances.				Exterior Arch reduced.	Barom.	Thermom.		Phenomena and Remarks.					
	Interior Arch.	Exterior Arch.					In Tent.	Out.						
		°	'	"						G. S. V.	+			
♂ Oct. 26.	28	56	45	30	3	17	10	28	57	19	29,67	70 $\frac{1}{4}$	71	☉'s L. L.
♀ — 28.	27	43	53	29	2	11	8	27	44	20 $\frac{1}{2}$	29,67	67	68	☉'s U. L.
♂ — 31.	27	16	52	29	0	13	21	27	17	19	29,60	65	67	☉'s L. L.
	10	17	7	10	3	29	0	10	17	26	29,61	55	50 $\frac{3}{4}$	Fomalhaut.
	55	4	25	58	3	0	15	55	4	56	29,61	55	50 $\frac{3}{4}$	α Pegasi.
	68	54	28	73	2	1	5	68	54	54	29,62	53 $\frac{1}{2}$	50	α Andromedæ.
	17	17	15	18	1	25	8	17	17	41	29,62	52 $\frac{1}{2}$	49 $\frac{1}{2}$	Achernar.
♂ Nov. 1.	26	24	22	28	0	21	20	26	24	33 $\frac{1}{2}$	29,70	67	66	☉'s U. L.
♀ — 2.	26	37	55	28	1	21	6	26	38	17 $\frac{1}{2}$	29,38	67 $\frac{1}{2}$	65 $\frac{1}{2}$	☉'s L. L.
	6	56	40	7	1	21	21	6	57	23	29,40	51 $\frac{1}{4}$	45 $\frac{1}{2}$	α Gruis.

Observations at Queen Charlotte's Sound, Continued.

Observations of meridian Altitudes of the Sun and Stars for the Latitude.

1774.	Zenith Distances.				Exterior Arch reduced.	Barom.	Thermom.		Phenomena and Remarks.
	Interior Arch.	Exterior Arch.					In Tent.	Out.	
		° ' ''	G. S. V.	" +	° ' ''				
8 Nov. 2.	6 56 53	7 1 22	4	6 57 33	29,40	50½	44½	β Gruis.	
	10 17 7	10 3 28	23	10 17 22½	29,41	50	43	Fomalhaut.	
	55 4 6	58 3 0	0	55 4 41	29,41	50	43	α Pegasi.	
	68 54 3	73 2 0	24	68 54 22½	29,42	48¼	43	α Andromedæ.	
	17 16 30	18 1 23	23	17 16 40	29,42	47	43¼	Achernar.	
24 — 3.	6 56 40	7 1 21	10	6 57 2½	29,49	55¼	53	α Gruis.	
	20 15 52	21 2 16	6	20 16 30	29,49	55¼	53	α Anseris Americani.	
	6 56 55	7 1 22	10	6 57 39	29,49	51¾	48¼	β Gruis.	
	10 16 40	10 3 28	12	10 17 11½	29,49	51¾	48¼	Fomalhaut.	
	55 4 8	58 3 0	4	55 4 45	29,49	51¾	48¼	α Pegasi.	
	68 54 23	73 2 0	22	68 54 44½	29,50	50	47½	α Andromedæ.	
	17 16 32	18 1 24	0	17 17 6½	29,54	51	50	Achernar.	
2 — 4.	6 56 58	7 1 22	13	6 57 29	29,52	59	56	β Gruis.	
	10 17 10	10 3 29	10	10 17 36	29,52	57½	53½	Fomalhaut.	
	55 4 35	58 3 1	0	55 5 7½	29,52	57½	53½	α Pegasi.	
5 — 5.	25 9 20	26 3 11	13	25 9 44	29,75	70	73½	☉'s U. L.	

For the Error of the Line of Collimation of the Quadrant.

1774.	Zenith distance of the upper hole: the quadrant direct.				Zenith distance of the lower hole: the quadrant inverted.				These Observations give four comparisons for each arch of the Quadrant; viz. + 21 ¹ / ₂ ", - 6 ¹ / ₂ ", + 15 ¹ / ₄ " and - 0 ¹ / ₄ " for the interior, or 90 arch; and + 1 ¹ / ₄ ", - 28 ³ / ₄ ", - 6 ¹ / ₂ " and - 21 ¹ / ₂ " for the exterior, or 96 arch: the mean of the former is 7 ¹ / ₂ " to be added, and of the latter 13 ³ / ₄ " to be subtracted.		
	Interior Arch.			Exterior Arch.	Interior Arch.			Exterior Arch.			
	°	'	"		G. S. V.	+	°			'	"
	89	13	25	95 0 23	0	90	45	55	96 3 8	20	
		13	35		23	14		45 25		8	7
		13	40		23	7		45 25		8	9
		13	50		23	24		45 45		8	20
		13	45		23	13		45 30		8	7
		13	50		23	12		45 35		8	10
		13	37		23	20		46 35	10	20	
		13	50		24	14		46 23	10	0	
		14	0		23	24		46 30	10	6	
		13	55		24	5		46 05	10	0	
		14	05		23	20		46 05	9	20	

Observations at Queen Charlotte's Sound, Continued.

Computations for the Latitude of the Place.

1774.	Latitude by the		Declination.	1774.	Latitude by the		Declination.
	Interior Arch.	Exterior Arch.			Interior Arch.	Exterior Arch.	
By Observations of the Sun.				By Observations of α Grus.			
♂ Oct. 26.	41 5 46 $\frac{1}{2}$	41 5 59 $\frac{1}{2}$	12 24 37 S.	♂ Nov. 2.	41 5 32	41 5 10	48 2 26 $\frac{1}{2}$ S.
♀ — 28.	41 5 58	41 6 4 $\frac{1}{2}$	13 5 23	♀ — 3.	41 5 32	41 5 21	
♂ — 31.	41 6 11	41 6 17 $\frac{1}{2}$	14 4 59	♂ — 4.	41 5 32	41 5 15 $\frac{1}{2}$	Means.
♂ Nov. 1.	41 5 29	41 5 19 $\frac{1}{2}$	14 24 25	By Observations of β Grus.			
♂ — 2.	41 5 51	41 5 58	14 43 36 $\frac{1}{2}$	♂ Nov. 2.	41 6 13 $\frac{1}{2}$	41 5 55	48 3 21 S.
♀ — 5.	41 5 44	41 5 47 $\frac{1}{2}$	15 39 44 $\frac{1}{2}$	♀ — 3.	41 6 11 $\frac{1}{2}$	41 5 39	
	41 5 50 $\frac{1}{2}$	41 5 54 $\frac{1}{2}$	Means.	♀ — 4.	41 6 8 $\frac{1}{2}$	41 5 46	Means.
By Observations of Fomalhaut.				♂ — 5.	41 6 11 $\frac{1}{2}$	41 5 46 $\frac{1}{2}$	
♂ Oct. 31.	41 6 03	41 6 01	30 48 40 S.	By an Observation of α Antaris Americani.			
♂ Nov. 2.	41 6 03	41 5 57 $\frac{1}{2}$		♂ Nov. 3.	41 6 12	41 5 55	61 22 32 $\frac{1}{2}$ S.
♀ — 3.	41 5 36	41 5 47	Means.	By Observations of Acherhar.			
♀ — 4.	41 6 06	41 6 11		♂ Oct. 31.	41 5 39	41 5 43	58 23 19 $\frac{1}{2}$ S.
	41 5 57 $\frac{1}{2}$	41 5 59	Means.	♂ Nov. 2.	41 6 24 $\frac{1}{2}$	41 6 13	
By Observations of α Andromedæ.				♀ — 3.	41 6 22	41 6 15 $\frac{1}{2}$	Means.
♂ Oct. 31.	41 6 6 $\frac{1}{2}$	41 6 11	27 50 56 $\frac{1}{2}$ N.	♂ — 4.	41 6 8 $\frac{1}{2}$	41 6 4	
♂ Nov. 2.	41 5 43	41 6 5		♀ — 5.	41 6 01	41 5 45 $\frac{1}{2}$	Mean of the southern stars.
♀ — 3.	41 6 2	41 6 2	Means.	♂ — 6.	41 5 52 $\frac{1}{2}$	41 5 59 $\frac{1}{2}$	Mean of the northern stars.
	41 5 57	41 6 6	Means.	♀ — 7.	41 5 57	41 5 52 $\frac{1}{2}$	Mean of both.
By Observations of α Pegasi.				♂ — 8.	41 5 54 $\frac{1}{2}$	Latitude South.	
♂ Oct. 31.	41 5 51	41 6 1	14 0 03 N.				
♂ Nov. 2.	41 5 33	41 5 47					
♀ — 3.	41 5 34	41 5 50	Means.				
♀ — 4.	41 6 0	41 6 11					
	41 5 44 $\frac{1}{2}$	41 5 57 $\frac{1}{2}$	Means.				

Lunar Observations for the Longitude.

1774.	Time by the Clock.	Apparent Time.	True Alt. of $\odot$'s Center.	Zenith Distance of $\odot$'s U. L.	Distance of the $\odot$ and $\odot$'s Limbs.	Error of the Quadrant.	Barometer.	Thermometer.	Longitude.	Remarks.
♂ Oct. 23.	4 33 49	14 40 55	♂'s first satellite immersed at a sensible distance from the Planet.						174 7 30	
♂ — 25.	8 41 26	18 44 30	16 24 $\frac{1}{2}$	65 15 $\frac{1}{2}$	109 39 $\frac{1}{2}$	+3 29	29.68	60 $\frac{1}{2}$	174 22 50	Dollond's Quadrant.
	43 21			26 $\frac{1}{2}$	39 $\frac{1}{2}$					
	44 40			33 $\frac{1}{2}$	39					
	46 2			40	38 $\frac{1}{2}$					
	47 14			46 $\frac{1}{2}$	38					
	48 21	18 54 49 $\frac{1}{2}$	18 21 $\frac{1}{2}$	52 $\frac{1}{2}$	38	-1 54	29.68	60 $\frac{1}{2}$	174 33 55	Ramfden's Quadrant.
	8 52 44			66 17 $\frac{1}{2}$	109 42					
	53 49			23 $\frac{1}{2}$	41 $\frac{1}{2}$					
	55 2			31	41 $\frac{1}{2}$					
	55 59			36 $\frac{1}{2}$	41					
	57 4	18 54 49 $\frac{1}{2}$	18 21 $\frac{1}{2}$	42 $\frac{1}{2}$	40 $\frac{1}{2}$					
	58 34			51 $\frac{1}{2}$	40 $\frac{1}{2}$					

Observations at Queen Charlotte's Sound, Continued.

Lunar Observations for the Longitude.

1774.	Time by the Clock.	Apparent Time.	True Altit. of ☉'s Center.	Zenith Distance of ☉'s U. L.	Distance of the ☉ and ☽'s Limbs.	Error of the Quadrant.	Barometer.	Thermometer.	Longitude.	Remarks.
	H M S	H M S	° ' "	° ' "	° ' "	" "			° ' "	
4 Oct. 27.	8 46 10	18 41 40 $\frac{1}{4}$	16 18 $\frac{1}{2}$	57 33 $\frac{1}{2}$	87 51 $\frac{1}{2}$	+3 38	29,72	59	174 6 30 $\frac{1}{4}$	Dollond's Quadrant.
	47 20			34	51 $\frac{1}{2}$					
	48 55			35 $\frac{3}{4}$	51					
	50 23			36 $\frac{1}{4}$	50 $\frac{1}{2}$					
	51 24			37 $\frac{1}{4}$	50 $\frac{1}{4}$					
	53 3	18 51 21 $\frac{1}{2}$	18 08	39 $\frac{1}{2}$	49 $\frac{1}{2}$	-1 42 $\frac{1}{2}$	29,72	59	174 33 52 $\frac{1}{2}$	Ramsden's Quadrant.
	8 55 25			57 43 $\frac{3}{4}$	87 54 $\frac{1}{2}$					
	57 3			45	54					
	58 33			47	53 $\frac{3}{4}$					
	59 51			49	53 $\frac{1}{4}$					
☉ — 30.	9 1 35	20 9 43 $\frac{3}{4}$	33 28 $\frac{3}{4}$	51 $\frac{3}{4}$	52 $\frac{3}{4}$	+3 32	29,58	67	174 31 15	Dollond's Quadrant.
	3 4			54	52					
	10 24 59			48 43 $\frac{1}{4}$	53 19					
	26 45			40	18 $\frac{3}{4}$					
	28 18			35 $\frac{1}{2}$	18 $\frac{1}{4}$					
	29 35	20 18 49	35 8 $\frac{2}{3}$	33 $\frac{1}{2}$	17 $\frac{1}{2}$	-2 26	29,58	67	174 41 15	Ramsden's Quadrant.
	30 45			31	17 $\frac{1}{4}$					
	32 6			28 $\frac{1}{2}$	17					
	10 34 29			48 24	53 22 $\frac{1}{2}$					
	35 59			21 $\frac{1}{2}$	22					
	37 9	21 29 38 $\frac{2}{3}$	49 15 $\frac{1}{3}$	19 $\frac{3}{4}$	21 $\frac{1}{2}$	+3 32	29,64	70	174 20 55	Dollond's Quadrant.
	38 41			17 $\frac{1}{4}$	21					
	39 56			16	20 $\frac{1}{2}$					
	41 0			14 $\frac{3}{4}$	20 $\frac{1}{4}$					
	11 56 45			49 28 $\frac{3}{4}$	52 49					
	58 16	21 44 57	50 7 $\frac{1}{4}$	36 $\frac{1}{4}$	48 $\frac{1}{2}$	-2 22	29,64	70	174 28 15	Ramsden's Quadrant.
	59 53			40	48 $\frac{1}{4}$					
	12 0 43			43	48					
	12 2 48			49 50	52 53					
	3 39			54 $\frac{1}{2}$	53 $\frac{1}{4}$					
	4 33	19 56 40 $\frac{1}{4}$	31 14 $\frac{3}{8}$	56 $\frac{1}{2}$	52 $\frac{3}{4}$	+3 26 $\frac{1}{2}$	29,68	65	174 41 7 $\frac{1}{2}$	Dollond's Quadrant.
	5 54			50 1 $\frac{1}{2}$	52 $\frac{1}{4}$					
☽ — 31.	10 14 41			49 0 $\frac{3}{4}$	41 22 $\frac{3}{4}$					
	16 19			48 48 $\frac{1}{2}$	22					
	18 41			34 $\frac{3}{4}$	21 $\frac{1}{4}$					
	20 0	27 $\frac{1}{4}$	21							
	21 54	18	20							
	24 21	3 $\frac{1}{2}$	20							
	10 27 5	47 49 $\frac{1}{4}$	41 25							
	30 7	32 $\frac{1}{2}$	23 $\frac{1}{2}$							
	31 41	25 $\frac{1}{4}$	22 $\frac{1}{2}$							
	33 0	18 $\frac{1}{4}$	22							
	34 24	12	21 $\frac{1}{2}$							
	36 37	01	21							

ASTRONOMICAL OBSERVATIONS.

III

Observations at Queen Charlotte's Sound, Continued.

Lunar Observations for the Longitude.

1774.	Time by the Clock.	Apparent Time.	Zenith Dist. of the ☉'s L. L.	True Altitude of the ☉'s Center.	Distance of the ☉ and ☾'s Limbs.	Error of the Quadrant.	Barometer.	Thermometer.	Longitude.	Remarks.
	H " "	H " "	° ' "	° ' "	° ' "	" " "			° ' "	
♂ Nov. 1.	13 51 59 53 52 55 12 56 22 57 27 58 27	23 28 41 ² / ₃	27 42 ¹ / ₂ 36 ¹ / ₄ 31 ¹ / ₄ 27 ¹ / ₂ 24 ¹ / ₈ 21 ¹ / ₂	48 17	27 43 42 ¹ / ₂ 42 ¹ / ₈ 42 41 ¹ / ₄ 41	+3 30	29,38	71 ¹ / ₂	174 39 7 ¹ / ₂	Dollond's Quadrant.
	14 0 30 1 46 2 51 3 41 6 30 7 54		27 15 ¹ / ₂ 12 ¹ / ₂ 9 ¹ / ₃ 7 1 26 58		27 46 ¹ / ₈ 46 45 ³ / ₈ 45 ³ / ₈ 44 ¹ / ₄ 43 ¹ / ₄					
		23 37 0 ¹ / ₂		47 36 ¹ / ₈		-2 45	29,38	71 ¹ / ₂	174 41 15	Ramsden's Quadrant.

The following Observations were made on board the Ship; the Place of the Observatory bearing S. by W. $\frac{1}{2}$ W. by Compaſs, about Half a Mile Diſtant.

1774.	Time by the Watch K.	Apparent Time.	Altitude of the ☉'s L. L.	True Altitude of the ☉'s Center.	Distance of the ☉ and ☾'s Limbs.	Error of the Quadrant.	Barometer.	Thermometer.	Latitude.	Remarks.
	H " "	H " "	° ' "	° ' "	° ' "	" " "			° ' "	
♂ Nov. 8.	8 21 56 22 24 ¹ / ₂ 22 52 23 23 23 51 24 24		41 22 27 31 ¹ / ₂ 37 42 47 ¹ / ₂			-2 44	29,35	60		
♀ — 9.	16 30 11 ¹ / ₂ 30 48 31 30 ¹ / ₂ 32 10 16 36 56 37 27 38 24 38 45 ¹ / ₂ 39 15 16 50 29 52 42 53 47 55 13 56 19 57 11	4 52 50 4 59 49 ¹ / ₂ 5 15 57	23 32 ² / ₃ 22 13 ¹ / ₈ 19 12 ¹ / ₄	66 20 ¹ / ₄ 66 18 ² / ₃ 65 50 ¹ / ₃	68 50 ¹ / ₄ 50 ¹ / ₄ 50 ¹ / ₄ 51 ¹ / ₄ 68 53 53 ¹ / ₂ 53 ¹ / ₂ 54 54 ¹ / ₄ 69 5 5 ¹ / ₂ 6 ¹ / ₄ 6 ¹ / ₄ 7 7 ¹ / ₄	+3 5 +3 5 -2 20	29,65 29,65 29,65	62 62 62	174 35 15 174 21 30 173 35 45	Dollond's Quadrant. Cloudy. Dollond's Quadrant. Ramsden's Quadrant. Very cloudy.

Observations made at Christmas Sound, in Terra del Fuego.

1774.	Equal Altitudes. Times by the Clock B.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
		H			H	
4 Dec. 22.	23 14	13		61 0 0		☉'s U. L. } ☉'s L. L. }
		13 42 51	45 55½	58 40 0		☉'s U. L. } ☉'s L. L. } Easterly: Very ☉'s U. L. } cloudy: ☉'s L. L. }
	5 44½	14 8 52½		55 0 0		☉'s U. L. }
	9 39					☉'s L. L. }
	46 49	14		49 20 0		☉'s U. L. }
						☉'s L. L. }
8 — 23.					18 19 14,14	☉'s L. L. } ☉'s U. L. }
	51 37	21		49 20 0		☉'s L. L. }
		22		55 0 0		☉'s U. L. } Westerly: ☉'s L. L. } Cloudy. ☉'s U. L. }
	32 41½	22 39 34		58 40 0		☉'s L. L. }
		22 55 39	52 34	61 0 0		☉'s U. L. }
				62 0 0		☉'s L. L. }
	15 14	23				☉'s U. L. }
	21 21	13 24 26				☉'s L. L. }
	25 14	28 19				☉'s U. L. } Easterly: ☉'s L. L. } Cloudy. ☉'s U. L. }
	52 01½	13		57 40 0		☉'s L. L. }
			9 51½	56 0 0		☉'s U. L. }
		14 10 49½				☉'s L. L. }
h — 24.					18 24 18,83	☉'s L. L. } ☉'s U. L. }
		22 37 44		56 0 0		☉'s L. L. } Westerly: Very ☉'s U. L. } cloudy. ☉'s L. L. }
			38 34½	57 40 0		☉'s U. L. }
	56 34	22		62 0 0		☉'s L. L. }
	23 22	23 20 17				☉'s U. L. }
	27 16	24 9				☉'s L. L. }
☉ — 25.	43 30½:	13 46 36	49 40½	60 20 0		☉'s U. L. }
	47 23½:	50 28	53 32	58 20 0		☉'s L. L. }
	57 42:	14 0 52½	3 47½			☉'s U. L. }
	1 30½	4 36	7 41			☉'s L. L. } Easterly: ☉'s U. L. } Cloudy. ☉'s L. L. }
	14 13½:	14 17 16	20 23	56 0 0		☉'s U. L. }
	18 04	21 11	24 17			☉'s L. L. }
	50 7½	14 53 19½	56 30½	51 0 0		☉'s U. L. }
	54 8	57 21	0 34			☉'s L. L. }
D — 26.					18 34 22,91	☉'s L. L. } Westerly: ☉'s U. L. } Cloudy.
	14 35	22 11 18½	8 7	51 0 0		
	18 43:	15 24½	12 6:			

Observations at Christmas Sound, Continued.

Observations at Christmas Sound, Continued.						
1774.	Equal Altitudes. Times by the Clock B.			Zenith Distance.	Time of apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.			
	" "	H " "	" "			
D Dec. 26.	50 38½	22 47 32	_____	} 56 0 0		☉'s L. L.
	54 37	51 27	48 22			☉'s U. L.
	7 11½	23 4 7	_____	} 58 20 0		☉'s L. L.
	_____	8 0	_____			☉'s U. L.
	21 23	23 18 18	15 9½ :	} 60 20 0		☉'s L. L.
	25 16½	22 12	19 9½ :			☉'s U. L.

Westerly :
Cloudy.

* * The Clock was fixed up in the usual manner, and the pendulum vibrated $1^{\circ}\frac{1}{2}$ each way from the perpendicular.

Meridian Zenith Distances of the Sun and Stars for the Latitude.

1774.	Zenith Distance.				Exterior Arch reduced.	Double Altitude of the ☉'s L. L.	Barometer.	Therm.	Remarks, &c.
	Interior Arch.	Exterior Arch.							
		° ' "	G. S. V.	+	° ' "				
h Dec. 24.	61 27 52	65 2 9	9	61 28 28½	29,63	45½	γ Orionis. δ ε ζ α		
	54 51 27	58 2 2	20	54 51 50					
	53 59 7	57 2 11	12	53 59 24½					
	53 15 57	56 3 9	12	53 16 20½					
	62 41 5	66 3 15	23	62 41 39½					
D — 26.	32 13 52	34 1 17	7	32 14 9	{ 115 34 35 115 33 27 }	29,56	49	☉'s L. L. { Dollond's Quadrant. Ramsden's do.	
	61 27 20	65 2 7	24	61 27 51					
	54 50 55	58 2 1	20	54 51 24	29,64	43	γ Orionis. δ ε ζ α		
	53 58 27	57 2 10	5	53 58 51					
	53 15 33	56 3 8	9	53 15 51					
	62 40 51	66 3 14	18	62 41 8½					
δ — 27.	31 43 0	33 3 10	7	31 42 57	115 29 40	29,55	51½	☉'s U. L.	

Observations at Christmas Sound, Continued.

There being no convenient place within view of the Observatory, where I could fix up a proper mark for trying the line of collimation of the quadrant by, I took the following zenith distances of the summit of a distant mountain, and raised the stand of the quadrant just as much as its center was depressed by inverting it.

Quadrant direct.					Quadrant inverted and raised.					Computations of the Latitude.					
Interior Arch.			Exterior Arch.		Interior Arch.			Exterior Arch.		1774.	Latitude by the		By Hadley's Quadrant.		
°	'	"	G.	S. V.	+	°	'	"	G.		S. V.	+		°	'
87	5	50	92	3	20	0	92	54	22	99	0	13	0		
	5	30			19	21		54	52			14	0		
	5	30			19	13		54	22			13	0		
	5	33			19	17		53	52			12	0		
	5	32			19	11		53	52			12	0		
	5	30			19	13		54	52			14	6		
	5	55			19	0		54	40			13	18		
	5	25			18	14		53	52			12	6		
	5	40			19	5		54	45			14	0		
	5	30			19	0		54	35			13	8		
	5	25			17	20		54	45			13	23		
Zenith Distance of the Top of a more distant Hill.															
88	40	56	94	2	11	23	91	19	0	97	1	19	22		
	41	1			12	8		19	0			20	21		
	41	3			12	3		18	50			19	21		
	40	43			11	21		18	50			20	0		
	40	40			11	25		18	50			20	0		
The two first sets make the error of the line of collimation — $\frac{1}{2}$ " for the interior, and — $5\frac{1}{2}$ " for the exterior arches of the Quadrant; and the two latter sets make them $+6\frac{3}{4}$ " and — $1\frac{1}{4}$ " respectively: The means are $+3\frac{1}{4}$ " and — $3\frac{1}{2}$ ".															

Latitude by the		By Hadley's Quadrant.			
Interior Arch.	Exterior Arch.				
°	'	"	°	'	"
Dec. 26.	Ramfden's Quadrant		55	21	39
	Dollond's ditto		55	21	6
27	Ramfden's ditto		55	21	25
The mean is			55	21	23
By the Sun.					
26.	55 22 17	55 22 27 $\frac{1}{2}$	55	22	6 $\frac{1}{2}$
27.	55 21 55 $\frac{1}{2}$	55 21 46			
By γ Orionis.					
24.	55 22 4	55 22 34	55	22	2
26.	55 21 33	55 21 57			
By δ Orionis.					
24.	55 21 53	55 22 9	55	21	47
26.	55 21 22	55 21 44			
By ϵ Orionis.					
24.	55 22 19	55 22 29	55	22	6
26.	55 21 39	55 21 57			
By ζ Orionis.					
24.	55 22 0 $\frac{1}{2}$	55 22 17	55	21	56
26.	55 21 37	55 21 48			
By α Orionis.					
24.	55 22 16	55 22 44	55	22	19 $\frac{1}{2}$
26.	55 22 4	55 22 13 $\frac{1}{2}$			
Mean of all			55	21	57 S.

Observations at Christmas Sound, Continued.

Computations of the Clock's Rate of going.

1774.	Time of apparent Noon by the Clock.			Syderial Time of apparent Noon.			Clock too fast for Syderial Time.		Clock gains on Syderial Time.		If the difference between the first and last Observations be taken, and divided by 3, the number of days between, the Clock's gain, each day, on Syderial Time will be only 36"31. Mr. Kendall's Watch appeared to be gaining, when here, at the rate of 12",377 in 24h. on mean time.
	H	"	"	H	"	"	"	"	"	"	
♀ Dec. 23.	18	19	14,14	18	4	24,7	14	49,44	0	37,99	
♂ — 24.		24	18,83		8	51,4	15	27,43	0	35,47	
♂ — 26.		34	22,91		17	44,55	16	38,36	0	36,73	

Lunar Observations for the Longitude of the Place.

1774.	Time by the Clock.			Apparent Time.	True Zenith Distance of ☉'s center.	Zenith Distance of ☉'s U. L.	Distance of the ☉ and ☉'s Limbs.	Error of the Quadrant.	Barom.	Thermom.	Longitude East.	Remarks.
	H	"	"									
♂ Dec. 26.	11	50	10	17 17 44	76 39 $\frac{1}{3}$	56 39 $\frac{1}{8}$	87 1 $\frac{1}{4}$	+4 1	29,64	46	289 55	Dollond's Quad. Hazy.
		51	51			35 $\frac{3}{8}$	87 0 $\frac{1}{4}$					
		53	16			31 $\frac{5}{8}$	87 0					
		54	26			29	86 59 $\frac{3}{4}$					
		55	25			26 $\frac{1}{2}$	59					
		56	29			23 $\frac{1}{2}$	59					
		57	42			20	58 $\frac{1}{2}$					
		58	26			18	58					
		59	25			16 $\frac{1}{4}$	57 $\frac{3}{4}$					
	12	0	25			13 $\frac{5}{8}$	57					
	12	3	16	17 29 32	75 2 $\frac{1}{8}$	56 8	87 0 $\frac{3}{4}$	+1 0	29,64	46	290 27 45	Ramfden's Quad. Hazy.
		4	29			5 $\frac{1}{4}$	87 0					
		5	19			4	87 0					
		6	14			2	86 59 $\frac{1}{2}$					
		7	10			56 0	59					
		8	5			55 58	59					
		9	4			56	58 $\frac{1}{2}$					
		9	52			54	58 $\frac{1}{4}$					
		10	42			52 $\frac{1}{2}$	58					
		11	51			50	57 $\frac{1}{2}$					

Observations at Christmas Sound, Continued.

Lunar Observations for the Longitude of the Place.

1774.	Time by the Clock.	Apparent Time.	True Zenith Distance of ☉'s center.	Zenith Distance of ☾'s U. L.	Distance of the ☉ and ☾'s Limbs.	Error of the Quadrant.	Barom.	Thermom.	Longitude East.	Remarks.
	H	H	°	°	°				°	
Dec. 26.	13 29 49	18 53 39	63 25	55 38 $\frac{1}{2}$	86 30	+1 0	29,60	47	290 43 30	Ramfden's Quad.
	31 14			40 $\frac{1}{2}$	29 $\frac{1}{2}$					
	32 12			42	29 $\frac{1}{4}$					
	32 56			43 $\frac{1}{2}$	29					
	34 3			45 $\frac{1}{4}$	28 $\frac{1}{2}$					
	13 36 38	19 0 15	62 29	55 49 $\frac{1}{2}$	86 22 $\frac{1}{3}$	+4 2	29,60	47	289 43 0	Dollond's Quad.
	37 29			51	22 $\frac{1}{4}$					
	38 18 $\frac{1}{2}$			52 $\frac{2}{3}$	22					
	39 4			54	21 $\frac{3}{4}$					
	39 46			55 $\frac{3}{8}$	21 $\frac{1}{4}$					
	40 35			56 $\frac{3}{4}$	21					

The mean result of these four is $290^{\circ} 16' 25''$. The mean of ten Observations taken before we arrived here, and reduced to the place by Mr. Kendall's Watch, gave the Longitude of the Observatory $289^{\circ} 52' 52''$; seven taken after leaving the place gave $289^{\circ} 42' 12''$: the mean of the three is $289^{\circ} 57' 9''\frac{1}{2}$ E.

Observations at Christmas Sound, Continued.

Observed Azimuths of the Sun's Center for the Variation of the Compass.

1774.	Zenith Distance of the ☉'s U. L.	Azimuth of the ☉'s center.	Variation East.	1774.	Zenith Distance of the ☉'s U. L.	Azimuth of the ☉'s center.	Variation East.	
	° ' "	° ' "	° ' "		° ' "	° ' "	° ' "	
Gregory's Compaſs.				Knight's Compaſs.				
♀ Dec. 23.	62 11 ⁵ / ₈	S. 67 15 W.	} 20 59	☉ Dec. 25.	63 36 ¹ / ₂	N. 68 35 E.	} 24 22 ² / ₃	
	62 20 ¹ / ₃	66 10			63 30 ³ / ₄	68 45		
	62 25 ¹ / ₄	68 45			63 21 ³ / ₄	68 50		
	62 31 ¹ / ₂	65 15			62 32 ¹ / ₂	N. 68 25 E.	} 24 13 ¹ / ₃	
	62 45 ² / ₃	63 45			62 24 ¹ / ₄	68 0		
	63 39	64 20			62 19	67 55		
	64 3	69 35	} 23 54 ² / ₃	♂ — 26.	70 5	N. 80 15 E.	} 22 54 ² / ₃	
Knight's Compaſs.					69 53 ¹ / ₄	80 0		
♂ — 24.	64 27 ³ / ₄	S. 61 50 W.			69 46	79 55		} 25 23
	64 44	60 30			69 38	79 30		
	64 50	59 55			69 30	79 15		
	65 1 ¹ / ₂	59 45			69 25	79 5		
	65 9 ¹ / ₂	59 45	} 27 17	Gregory's Compaſs.				
	65 17 ¹ / ₆	59 25			68 35	N. 73 55 E.	} 25 23	
Gregory's Compaſs.					68 21	75 50		
	65 38	S. 57 20 W.			68 15 ¹ / ₆	76 5		
	65 43 ¹ / ₆	54 20			68 3 ¹ / ₂	77 0		
	65 56 ¹ / ₂	56 10			67 52 ³ / ₄	76 50		
	66 11	54 35		67 46	72 0			

The disagreement which is found amongst these variations is not to be attributed to any mistake in the Observations, for the Compasses, and especially that of Gregory's, would, while here, point frequently five, six, and sometimes even eight and ten degrees different when directed to the same object. I cannot assign any reason for this strange circumstance; the Compasses performed well enough both before and after leaving the place.

Observations for the Dip of the Needle's South End.

1774.	Face of the Instrument. East.	West.	1774.	Face of the Instrument. East.	West.	1774.	Face of the Instrument. East.	West.
♂ Dec. 22.	66 20	68 0	♀ Dec. 23.	Altered the Balance.		♀ Dec. 23.	Changed the Poles.	
	66 50	67 05		65 05	66 15		67 50	67 30
				65 35	65 50		67 45	66 55
				65 25	66 05		67 20	67 0
Changed the Poles.			Changed the Poles.			Changed the Poles.		
	68 25	67 0		67 10	66 15		65 40	66 20
	69 40	66 55		67 35	67 15		67 15	66 50
	67 0	66 45		66 40	67 15		66 25	66 35
	69 10	66 30				The mean of all is 66 53 $\frac{1}{2}$		

Observations at Christmas Sound, Continued.

Observations on the Tides.

1774.	Time by the Clock.	Appa- rent Time.	Height of the Water.	Remarks, &c.	1774.	Time by the Clock.	Appa- rent Time.	Height of the Water.	Remarks, &c.
H	H	F. I.			H	H	F. I.		
24 Dec. 22.			0 6 $\frac{1}{4}$	Low Water.	12 Dec. 24.	23 38		2 3	
	23 15		1 10					3 3	High Water, Evening
	23 32		2 0					4 4 $\frac{1}{2}$	Ditto, Morning.
	0 30 $\frac{1}{4}$	6 15 $\frac{1}{4}$	2 4 $\frac{1}{2}$	High Water.	☉ — 25.			1 3 $\frac{1}{2}$	Low Water.
	1 16		2 0					4 1	High Water, Evening.
	1 40		1 10						The mark was again disturbed by the boats.
	10 40		3 4			18 14		2 4 $\frac{1}{2}$	
	10 56		3 7			18 33		2 2	
	11 14 $\frac{1}{2}$	17 26 $\frac{1}{4}$	3 8 $\frac{1}{2}$	High Water.	☾ — 26.	18 50		1 11 $\frac{1}{2}$	
	11 30		3 7			19 4		1 10	
	12 8		3 4			19 20		1 9	
	The mark was disturbed by the boats.					21 20 $\frac{1}{2}$	2 45 $\frac{1}{2}$	1 2	Low Water.
♀ — 23.			0 5	Low Water.		23 28		1 9	
	22 36		1 9			23 40		1 10	
	23 43		2 4			23 50		1 11 $\frac{1}{2}$	
	0 2		2 5 $\frac{1}{4}$			0 6		2 2	
	0 13		2 6 $\frac{1}{4}$			0 20		2 4 $\frac{1}{2}$	
	1 37 $\frac{3}{4}$	7 17 $\frac{1}{2}$	2 8 $\frac{1}{2}$	High Water.		2 40		3 5	
	3 2		2 6 $\frac{1}{4}$			2 56		3 6	
	3 15		2 5 $\frac{1}{4}$			3 51 $\frac{1}{2}$	9 15	3 9	High Water.
	3 31		2 4			4 45		3 6	
	11 15		3 8 $\frac{1}{2}$			5 5		3 5	
	11 40		3 9			12 15		3 0	
	12 19 $\frac{1}{4}$	17 56 $\frac{1}{4}$	3 10	High Water.		12 30		3 1 $\frac{1}{2}$	
	13 7		3 9			12 45		3 2 $\frac{1}{2}$	
	13 12		3 8 $\frac{1}{2}$			13 20		3 4 $\frac{1}{2}$	
	15 53		2 3			15 8 $\frac{3}{8}$	21 29 $\frac{1}{2}$	3 10 $\frac{1}{2}$	High Water.
	16 28		1 11			17 7		3 4 $\frac{1}{2}$	
	16 42		1 7 $\frac{1}{2}$			17 30		3 2 $\frac{1}{2}$	
♂ — 24.	19 47 $\frac{3}{4}$	1 23 $\frac{1}{2}$	0 5 $\frac{1}{2}$	Low Water.		17 40		3 1 $\frac{1}{2}$	
	22 50		1 7 $\frac{1}{2}$			18 0		3 0	
	23 15		1 11		♂ — 27.			1 2 $\frac{1}{2}$	Low Water.

From these Observations, it appears that the Moon passes the meridian about 2 $\frac{1}{2}$ hours before it is high water at this place: Mean height of the morning tides, three feet 1 $\frac{1}{4}$ inches, the Moon being then above the horizon; the mean evening tide was two feet seven inches.

Observations made at the Cape of Good Hope.

1775.	Equal Altitudes. Times by the Clock B.			Zenith Distance.	Azimuth of ☉'s center from the North at the times of equal Altitudes.			Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.		Lower Wire.	Middle Wire.	Upper Wire.		
24 March 23.	2 6 $\frac{1}{2}$	17 4 19 $\frac{1}{4}$	6 31 $\frac{1}{2}$	71 40 °					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
	4 51 $\frac{1}{4}$	7 2	9 13 $\frac{1}{4}$						
	29 34	17 31 17	33 31 $\frac{1}{2}$	66 20 °					
♀ — 24.	31 49	34 4 $\frac{1}{2}$	36 17 $\frac{1}{2}$					21 33 15,73	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	34 16 $\frac{1}{2}$	1 32 2 $\frac{1}{2}$	32 36 $\frac{1}{4}$	66 20 °					
	37 2 $\frac{3}{4}$	34 49	56 53	71 40 °					
	1 13	1 59 2 $\frac{1}{4}$	59 36	66 ° °					
	3 57 $\frac{1}{2}$	2 1 46 $\frac{1}{2}$	39 23 $\frac{1}{2}$						
	34 54	17 37 10 $\frac{1}{2}$	42 10 $\frac{1}{2}$	63 ° °				21 36 12,22	☉'s L. L. } Westerly. ☉'s U. L. } Easterly : ☉'s L. L. } Very hazy.
♂ — 25.	37 41 $\frac{1}{4}$	39 57 $\frac{1}{4}$							
	34 17 $\frac{1}{2}$	1 32 2	32 35 $\frac{1}{2}$	66 ° °					
	54 42 $\frac{1}{2}$	17 56 58	59 15 $\frac{1}{2}$	63 ° °					
☉ — 26.	57 31 $\frac{1}{2}$	59 49 $\frac{1}{2}$	2 8					21 39 7,95	☉'s L. L. } Westerly : ☉'s U. L. } Cloudy.
	20 19	1 18 1 $\frac{1}{2}$	18 36 $\frac{1}{2}$	63 ° °					
	23 10 $\frac{1}{2}$	20 53							
In the morning I found the Clock had stopped; occasioned by the thickness of a new glass which I had got put before its face, the old one being broke in taking down the Clock at Otaheite.									
	39 20 $\frac{3}{4}$	20 41 39 $\frac{1}{2}$	43 56 $\frac{1}{2}$	63 ° °					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
	42 13	14 31 $\frac{1}{4}$	46 49 $\frac{1}{4}$	60 40 °				0 22 28,6	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
D — 27.	51 44 $\frac{1}{4}$	20 54 5 $\frac{1}{2}$							
	54 39 $\frac{1}{2}$	57 0 $\frac{1}{2}$							
	49 55 $\frac{1}{2}$	3 47 32	45 12	60 40 °					
	2 19 $\frac{1}{2}$	4 0 1 $\frac{3}{4}$	57 43 $\frac{1}{2}$	63 ° °					
	5 12		0 36	63 40 °					
	40 6 $\frac{1}{2}$	20 42 24	44 41 $\frac{1}{4}$	61 40 °				0 25 24,71	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	50 42	45 15 $\frac{3}{4}$	47 33						
♂ — 28	53 35 $\frac{1}{2}$	55 55 $\frac{1}{2}$	58 16	61 40 °					
	56 48 $\frac{3}{4}$	3 54 30 $\frac{1}{2}$	52 8 $\frac{1}{2}$	61 40 °					
	59 42 $\frac{1}{2}$	57 23 $\frac{1}{4}$	55 5 $\frac{1}{4}$	63 40 °					
	7 26 $\frac{1}{4}$	4 5 8	5 43 $\frac{1}{2}$	61 40 °				0 28 19,36	☉'s L. L. } Westerly. ☉'s U. L. } Easterly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } ☉'s U. L. }
	10 18 $\frac{1}{2}$	8 0 $\frac{1}{2}$	59 41 $\frac{1}{2}$						
♀ — 29.	55 59 $\frac{1}{2}$	20 57 21	2 37	65 40 °					
	57 54 $\frac{1}{4}$	21 0 16							
	58 19 $\frac{3}{4}$	3 55 58 $\frac{3}{4}$	53 37 $\frac{1}{2}$	61 40 °					
	1 14 $\frac{1}{4}$	58 53 $\frac{1}{2}$	56 34 $\frac{1}{2}$	65 40 °					
	38 2 $\frac{1}{4}$	20 40 21	42 38						
♂ — 30	40 54	43 13	45 30 $\frac{1}{2}$	67 ° °				0 31 14,19	☉'s L. L. } Westerly. ☉'s U. L. } Easterly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } ☉'s U. L. }
	21 8 $\frac{1}{2}$	4 18 51	16 33						
	24 0 $\frac{1}{2}$	21 42	19 26						
	35 21	20 37 37 $\frac{1}{2}$	39 5 $\frac{1}{2}$						
♀ — 31.	38 8	40 26 $\frac{1}{2}$	42 42 $\frac{1}{2}$					0 34 10,68	☉'s L. L. } Easterly.

Observations at the Cape of Good Hope, Continued.

1775.	Equal Altitudes. Times by the Clock B.			Zenith Distance.	Azimuth of ☉'s center from the North, at the times of equal Altitudes.			Time of ap- parent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.		Lower Wire.	Middle Wire.	Upper Wire.		
	H	H	H	°	°	°	°	H	
♀ March 31.	29 46½ 32 36	4 27 29½ 30 19:	25 13 28 4	67 0 0					☉'s L. L. } Westerly. ☉'s U. L. }
	44 4½	20 43 32½ 46 22½	45 49½ 48 41	66 40 0					☉'s U. L. } Easterly. ☉'s L. L. }
♂ April 1.	29 40½ 32 31	4 27 22½ 30 17	25 5½ 27 57½	66 40 0				0 37 5,75	☉'s L. L. } Westerly. ☉'s U. L. }
	31 32½ 34 21½	20 33 48½ 36 38	38 54	69 20 0					☉'s U. L. } Easterly. ☉'s L. L. }
	45 27½ 48 18½	20 47 45½ 50 37:	50 2½ 52 56	66 40 0				0 40 0,27	☉'s U. L. } Westerly. ☉'s L. L. }
☉ — 2.	31 16 34 8½	4 28 57½ 31 50	26 40 29 32½	66 40 0					☉'s U. L. } Easterly. ☉'s L. L. }
	48 2½	4 42 58 45 46	40 41½ 43 32½	69 20 0				0 48 46,31	☉'s U. L. } Westerly. ☉'s L. L. }
♂ — 4.	6 12½ 9 32½	22 8 55 12 16	11 35½ 14 58½	54 40 0					☉'s U. L. } Easterly. ☉'s L. L. }
♀ — 5.	27 37 30 58	3 24 52½ 28 16	22 9 25 34	54 40 0		89 10	88 30		☉'s U. L. } Westerly. ☉'s L. L. }
	43 0½ 45 49½	20 45 17½ 48 6½	47 34 50 24½	70 20 0	89 0 86 20	88 25 86 45	87 45 86 15		☉'s U. L. } Easterly. ☉'s L. L. }
	57 3½ 59 56	20 59 23½ 21 2 17½	1 43 4 36½	67 40 0	86 45	86 15	85 55	0 51 40,5	☉'s U. L. } Westerly. ☉'s L. L. }
♂ — 6.	42 57½ 45 52	4 40 38½ 43 31½	41 12½	67 40 0	Var. 43 30 43 50	21 32½ 42 30	West. 42 30		☉'s U. L. } Easterly. ☉'s L. L. }
	57 6½ 59 56	4 54 46½ 57 39½	52 31 55 21	70 20 0	45 55	45 40 46 0	45 5	0 54 37,38	☉'s U. L. } Westerly. ☉'s L. L. }
	55 54½ 58 49½	20 58 16½ 21 1 8½	0 35: 3 28½	68 40 0					☉'s U. L. } Easterly. ☉'s L. L. }
	10 14½ 13 8½	21 12 36½ 15 32½	14 57½	66 0 0					
♀ — 7.	35 41 38 36½	4 33 18 36 15	30 56 33 53½	66 0 0					☉'s U. L. } Westerly. ☉'s L. L. }
	49 57½	4 47 40½ 50 32	45 21 48 14½	68 40 0					☉'s U. L. } Easterly. ☉'s L. L. }
♂ — 8.	55 37 58 27	20 57 55 21 0 45	0 12½ 3 4½	70 20 0					☉'s U. L. } Westerly. ☉'s L. L. }
	9 49: 12 44½	21 12 11½ 15 7½	14 32 17 27½	67 40 0				1 0 32,08	☉'s U. L. } Easterly. ☉'s L. L. }
☉ — 9.	47 54½ 50 52½	4 45 33½ 48 28½	43 11½ 46 8½	67 40 0					☉'s U. L. } Westerly. ☉'s L. L. }
	2 11 5 1½	4 59 50½ 5 2 43	57 32 0 24½	70 20 0					☉'s U. L. } Easterly. ☉'s L. L. }
	6 54 9 48½	21 9 16½ 12 10½	11 35½ 14 31:	69 0 0				1 3 29,16	☉'s U. L. } Westerly. ☉'s L. L. }
D — 10.	56 43 59 38	4 54 22½ 57 17	52 2½ 54 57	69 0 0					

Observations at the Cape of Good Hope, Continued.

1775.	Equal Altitudes. Times by the Clock B.			Zenith Distance.	Azimuth of the ☉'s Center from the North, at the Times of equal Altitudes.			Time of Apparent Noon by the Clock.	Phenomena and Remarks.
	Lower Wire.	Middle Wire.	Upper Wire.		Lower Wire.	Middle Wire.	Upper Wire.		
♀ April 12.	17 54 $\frac{3}{4}$	21 20 20	22 42	69 20 0					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. } ☉'s L. L. }
24 — 13.	20 53	23 15 $\frac{1}{2}$	25 39	66 40 0				1 12 29,72	☉'s L. L. } ☉'s U. L. } Westerly. ☉'s L. L. } ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
♀ — 14.	32 34 $\frac{1}{2}$	21 35 0	37 25 $\frac{1}{2}$	69 20 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
♂ — 15.	35 33 $\frac{1}{2}$	38 0 $\frac{1}{2}$		70 20 0				1 18 29,49	☉'s U. L. } ☉'s L. L. } Westerly. ☉'s U. L. }
The Clock stopped again to day for a few seconds, by the gla's pressing against the minute hand.									
☉ — 16.	37 15 $\frac{1}{2}$	22 40 4	42 52 $\frac{1}{2}$	58 40 0					☉'s U. L. } Easterly. ☉'s L. L. }
D — 17.	40 43	43 33 $\frac{1}{4}$		58 40 0				1 23 54,4	☉'s L. L. } Westerly. ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
♂ — 18.	6 41 $\frac{1}{2}$	4 3 51 $\frac{1}{2}$	1 1 $\frac{1}{2}$	52 40 0				1 26 54,84	☉'s L. L. } Westerly. ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	10 9 $\frac{1}{2}$	7 21	4 33 $\frac{1}{2}$	52 40 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
	24 4 $\frac{1}{2}$	23 27 31 $\frac{1}{2}$	30 58	67 40 0				1 29 58,52	☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	28 18 $\frac{1}{2}$	31 47 $\frac{1}{2}$	35 17 $\frac{1}{2}$	68 0 0					☉'s L. L. } Westerly. ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
		3 21 37	18 7	68 0 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
		25 58	32 29	68 0 0					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	39 32 $\frac{1}{2}$	21	44 21	68 0 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
	42 30	21 44 56	47 21	68 0 0					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	52 35	21 55 4 $\frac{1}{2}$	57 31	68 0 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
	55 40		0 36	68 0 0					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
♀ — 19.	3 53	5 1 23	58 55	67 40 0					☉'s L. L. } Westerly. ☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	6 59 $\frac{1}{2}$	4 27 $\frac{1}{2}$	2 1	70 0 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
	17 1	5 14 35	12 11	68 0 0					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	20 2 $\frac{1}{2}$	17 35 $\frac{1}{2}$	15 11 $\frac{1}{2}$	68 0 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
	55 4	21 57 34 $\frac{1}{2}$	0 3	68 0 0					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	58 7 $\frac{1}{2}$	22 0 38	3 6	68 0 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
24 — 20.		5 4 56	2 29	68 0 0					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	10 29	7 57 $\frac{1}{2}$	5 33	68 0 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
♂ — 22.	6 17 $\frac{1}{2}$	22 8 48 $\frac{1}{2}$	11 18	68 20 0					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	9 22	11 53 $\frac{1}{2}$	14 24 $\frac{1}{2}$	68 20 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }
☉ — 23.	14 26	5 11 54 $\frac{1}{2}$		68 20 0					☉'s U. L. } ☉'s L. L. } Easterly. ☉'s U. L. }
	17 32 $\frac{1}{2}$	15 1	12 31 $\frac{1}{2}$	68 20 0					☉'s L. L. } ☉'s U. L. } Easterly. ☉'s L. L. }

The Clock was fixed up in the usual manner.

The pendulum vibrated $1^{\circ}\frac{3}{8}$ each way from the perpendicular, until April 9, after which its vibrations were $1^{\circ}\frac{3}{4}$ each way until it was taken down.

Observations at the Cape of Good Hope, Continued.

Observed Times of the transits of the Sun, Moon, and Stars, over the Meridian.

1775.	Times by the Clock B.					Phenomena.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	" "	" "	H " "	" "	" "	
☉ March 26.	33 23 $\frac{1}{4}$	34 5 $\frac{1}{4}$ 36 14	21 34 48 36 56 $\frac{3}{4}$	35 31 37 39 $\frac{1}{2}$	38 21 $\frac{3}{4}$	☉'s 1st Limb. ☉'s 2d Limb.
	Moved the stand of the Instrument a small matter, so as to carry it to the westward, and fixed it very firmly.					
☾ — 27.	20 9 $\frac{1}{2}$	20 51 $\frac{1}{2}$ 23 0 $\frac{1}{2}$	0 21 34 $\frac{1}{2}$ 0 23 43	22 17 $\frac{1}{4}$ 24 26 $\frac{1}{4}$	— 8 $\frac{3}{4}$	☉'s 1st Limb. ☉'s 2d Limb.
	Moved the Instrument, by means of the screw, to the eastward.					
♂ — 28.	31 54 $\frac{1}{2}$ 24 17 23 1 $\frac{1}{4}$	32 38 24 59 $\frac{1}{4}$ 23 43 25 52 $\frac{1}{4}$ 0 31 $\frac{1}{4}$	6 33 23 7 25 42 0 24 25 $\frac{3}{4}$ 0 26 34 $\frac{3}{4}$ 5 1 14	34 7 $\frac{3}{4}$ 26 25 25 9 27 17 $\frac{3}{4}$ 1 58	34 51 27 7 27 59 $\frac{1}{2}$ 2 39 $\frac{3}{4}$	Syrius. Procyon. ☉'s 1st Limb. ☉'s 2d Limb. Rigel.
	59 48 $\frac{1}{2}$ 39 5 $\frac{1}{2}$ 31 12 $\frac{1}{2}$ 16 4 $\frac{1}{2}$ 23 34 27 26	39 47 $\frac{3}{4}$ 31 56 $\frac{1}{4}$ 16 54 24 16 $\frac{1}{4}$ 28 13 $\frac{1}{2}$ 36 12	5 40 29 $\frac{3}{4}$ 6 32 41 7 17 44 7 24 59 7 29 1 $\frac{3}{4}$ 19 36 55	41 14 $\frac{1}{2}$ 33 26 18 35 $\frac{1}{4}$ 25 42 $\frac{1}{2}$ 29 51 37 38 $\frac{1}{4}$	41 55 $\frac{3}{4}$ 34 9 19 24 $\frac{1}{2}$ 26 24 $\frac{1}{2}$ 30 38 $\frac{1}{2}$ 55 48 $\frac{1}{2}$	α Orionis. Syrius. Castor. Procyon. Pollux. α Aquilæ.
♀ — 29.	52 54 $\frac{1}{2}$	53 38 26 37 $\frac{3}{4}$	22 54 21 $\frac{3}{4}$ 0 27 20 0 29 29 $\frac{1}{2}$	55 6 $\frac{1}{2}$ 30 12 $\frac{1}{2}$ 1 14 $\frac{3}{4}$	55 48 $\frac{1}{2}$ 1 56 $\frac{1}{4}$	☉'s 2d Limb. ☉'s 1st L. } Capt. Cook ☉'s 2d L. } Rigel.
	59 5 $\frac{3}{4}$ 30 29 $\frac{3}{4}$	59 48 39 4 $\frac{1}{2}$ 31 13 $\frac{1}{4}$	5 0 31 5 39 47 $\frac{1}{2}$ 6 31 58 19 36 11	40 31 32 42 $\frac{1}{2}$ 33 26	1 56 $\frac{1}{4}$ 33 26	α Orionis. Syrius. α Aquilæ; cloudy.
♂ — 30.	28 50 $\frac{1}{2}$ 37 38 $\frac{1}{2}$ 29 46 $\frac{1}{4}$	29 32 31 41 $\frac{1}{4}$ 38 21 $\frac{1}{4}$ 30 30	0 30 14 $\frac{1}{2}$ 0 32 24 $\frac{1}{4}$ 5 39 4 6 31 14 $\frac{3}{4}$	30 58 $\frac{1}{2}$ 33 7 $\frac{1}{2}$ 39 47 31 59 $\frac{1}{4}$	33 48 $\frac{1}{4}$ 40 29 32 42 $\frac{1}{2}$	☉'s 1st L. } Cloudy. ☉'s 2d L. } α Orionis. Syrius.
	Moved the Instrument a little more to the eastward, by means of the horizontal screw.					
♀ — 31.	31 43 $\frac{1}{4}$ 33 52	32 24 $\frac{3}{4}$ 34 33 $\frac{3}{4}$	0 23 8 0 35 17	33 51 36 0 $\frac{1}{4}$	34 33 36 42 $\frac{1}{2}$	☉'s 1st Limb. ☉'s 2d Limb.
♂ April 1.	34 38 $\frac{1}{2}$ 36 47 $\frac{1}{2}$ 13 8 20 39 $\frac{1}{2}$	35 21 37 30 13 57 21 22 $\frac{1}{2}$	0 36 3 $\frac{1}{4}$ 0 38 13 7 14 47 $\frac{3}{4}$ 7 22 4 $\frac{1}{2}$ 7 26 5 $\frac{3}{4}$ 9 11 2 $\frac{3}{4}$ 9 50 52 $\frac{3}{4}$	36 47 38 56 15 39 22 48 11 46 51 37	37 28 $\frac{3}{4}$ 39 37 $\frac{1}{2}$ 16 28 23 29 $\frac{1}{2}$ 12 27 $\frac{3}{4}$	☉'s 1st Limb. ☉'s 2d Limb. Castor. Procyon. Pollux. α Hydra. Regulus.

Observations at the Cape of Good Hope, Continued.

Observed Times of the Transits of the Sun, Moon, and Stars over the Meridian.

1775.	Times by the Clock B.					Phenomena, &c.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
			H			
☉ April 2.	37 32 $\frac{3}{4}$	38 15	0 38 57 $\frac{3}{4}$	39 41		☉'s 1st Limb.
		40 24 $\frac{1}{2}$	0 41 7 $\frac{1}{4}$	41 50 $\frac{1}{4}$	42 31 $\frac{3}{4}$	☉'s 2d Limb.
	27 52 $\frac{1}{4}$	28 36	2 29 20 $\frac{1}{4}$	30 5	30 48 $\frac{1}{4}$	☾'s 1st Limb.
	15 28 $\frac{1}{2}$	16 12 $\frac{1}{2}$	4 16 56 $\frac{1}{2}$	17 41	18 24 $\frac{1}{4}$	Aldebaran.
		56 54	4 57 36 $\frac{3}{4}$	58 20		Rigel.
	35 27	36 9 $\frac{1}{4}$	5 36 52 $\frac{1}{4}$	37 36	38 17 $\frac{1}{2}$	α Orionis.
	27 36	28 19 $\frac{1}{2}$	6 29 4	29 48 $\frac{3}{4}$	30 32 $\frac{1}{2}$	Syrius.
	12 23 $\frac{1}{2}$	13 12 $\frac{1}{2}$	7 14 3 $\frac{1}{4}$	14 54 $\frac{1}{2}$	15 43 $\frac{1}{2}$	Castor.
	19 55 $\frac{1}{4}$	20 37 $\frac{3}{4}$	7 21 20 $\frac{1}{4}$	22 3 $\frac{1}{2}$	22 45	Procyon.
		24 33	7 25 21 $\frac{1}{4}$	26 10 $\frac{1}{4}$		Pollux.
☾ — 3.	40 28 $\frac{1}{2}$	41 10	0 41 53	42 36 $\frac{1}{4}$		☉'s 1st L. } Cloudy.
		43 19	44 2 $\frac{1}{4}$	44 45 $\frac{1}{4}$	45 25 $\frac{1}{2}$	☉'s 2d L. }
☿ — 4.	43 23 $\frac{1}{2}$	44 6	0 44 48 $\frac{2}{3}$	45 31 $\frac{1}{2}$		☉'s 1st L. } Cloudy.
		46 15 $\frac{1}{4}$	0 46 58 $\frac{1}{2}$	47 41 $\frac{1}{2}$	48 23 $\frac{3}{4}$	☉'s 2d L. }
♂ — 5.	46 19 $\frac{1}{2}$	47 1 $\frac{1}{4}$	0 47 44	48 27 $\frac{1}{4}$		☉'s 1st L. } Cloudy.
		49 11	0 49 53 $\frac{1}{2}$	50 36 $\frac{3}{4}$	51 18 $\frac{3}{4}$	☉'s 2d L. }
	13 19 $\frac{1}{2}$	14 3	4 14 47 $\frac{1}{3}$	15 32 $\frac{1}{4}$	16 15 $\frac{1}{2}$	Aldebaran.
	54 2 $\frac{1}{2}$	54 44 $\frac{3}{4}$	4 55 27 $\frac{1}{2}$	56 11 $\frac{1}{4}$	56 53 $\frac{1}{2}$	Rigel.
	5 41 $\frac{1}{4}$	6 27	5 7 13	7 59 $\frac{1}{2}$	8 44	☾'s 1st Limb.
	33 17 $\frac{3}{4}$	34 0 $\frac{1}{4}$	5 34 44	35 26 $\frac{1}{4}$	36 8 $\frac{1}{2}$	α Orionis.
	25 27	26 11	6 26 55 $\frac{1}{3}$	27 40	28 23	Syrius.
	10 13 $\frac{3}{4}$	11 3 $\frac{1}{2}$	7 11 54	12 44 $\frac{1}{2}$	13 34	Castor.
	17 46	18 28 $\frac{1}{4}$	7 19 11	19 54 $\frac{3}{4}$	20 36	Procyon.
		22 23 $\frac{1}{2}$	7 23 12	24 1 $\frac{1}{3}$		Pollux.
♂ — 6.	49 14 $\frac{1}{2}$	49 56 $\frac{1}{2}$	0 50 39	51 39		☉'s 1st Limb.
		52 5 $\frac{3}{4}$	52 48 $\frac{1}{2}$	53 32 $\frac{1}{4}$	54 13 $\frac{1}{2}$	☉'s 2d L.
	12 36 $\frac{1}{4}$	13 19 $\frac{1}{2}$	4 14 3 $\frac{3}{4}$	14 48 $\frac{1}{4}$	15 31 $\frac{1}{2}$	Aldebaran.
	32 34	33 15 $\frac{3}{4}$	5 33 59 $\frac{1}{2}$	34 43	35 25 $\frac{1}{2}$	α Orionis.
	57 43 $\frac{1}{4}$	58 29	5 59 15 $\frac{1}{4}$	0 2 $\frac{1}{2}$	0 46 $\frac{1}{4}$	☾'s 1st Limb.
		25 27 $\frac{1}{4}$	6 26 11 $\frac{3}{4}$	26 57		Syrius.
	9 29 $\frac{3}{4}$	10 19 $\frac{1}{4}$	7 11 9 $\frac{3}{4}$	12 1	12 50	Castor.
On examining the Transit Instrument this morning, I found that the level shewed the west end to be a small matter the highest: Adjusted it, and moved the Instrument a little more to the eastward, as well to be nearer the plane of the Meridian, as to make the middle wire coincide with the sharp edge of a cliff in the Table Mountain, which being seen against the sky, formed a much better Meridian Mark than what I had before.						
♀ — 7.	54 18	55 0 $\frac{1}{4}$	0 53 33 $\frac{3}{4}$	54 16 $\frac{1}{2}$	54 59	☉'s 1st L. } Cloudy.
			0 55 42 $\frac{3}{4}$			☉'s 2d L. }
♂ — 8.	52 34 $\frac{3}{4}$	53 17 $\frac{1}{2}$	4 54 0 $\frac{1}{4}$	54 43 $\frac{1}{2}$	55 25 $\frac{3}{4}$	Rigel.
		0 52 $\frac{3}{4}$	5 1 40 $\frac{3}{4}$	2 29 $\frac{3}{4}$		β Tauri.

Observed Times of the Transits of the Sun, Moon, and Stars, over the Meridian.

		Times by the Clock B.					Phenomena, &c.
1775.		First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
h April	8.	31 8 $\frac{3}{4}$	31 51	5 32 34	33 17 $\frac{1}{2}$	33 59	α Orionis.
		8 4 $\frac{1}{2}$	8 54 $\frac{1}{2}$	7 9 44 $\frac{3}{4}$	10 36	11 25	Castor } Captain Cook.
		15 37	16 19 $\frac{1}{4}$	7 17 2 $\frac{1}{4}$	17 45	18 27	Procyon }
		19 27	20 14 $\frac{3}{4}$	7 21 3 $\frac{1}{2}$	21 52 $\frac{1}{4}$	22 39 $\frac{1}{2}$	Pollux.
			36 38 $\frac{1}{2}$	7 37 23 $\frac{1}{2}$	38 9 $\frac{1}{2}$		Suposed ω Cancri.
		39 53 $\frac{1}{2}$	40 38 $\frac{3}{4}$	7 41 24 $\frac{1}{2}$	42 11 $\frac{1}{4}$	42 55 $\frac{1}{2}$	ν 's 1st Limb.
		46 22 $\frac{1}{4}$	47 6	7 47 50	48 34 $\frac{1}{2}$	49 17 $\frac{1}{2}$	ζ Cancri.
		4 35	5 17 $\frac{1}{4}$	9 —	6 44	7 26	α Hydræ.
		44 23 $\frac{1}{2}$	45 6	9 45 50	46 34 $\frac{1}{2}$	47 17	Regulus.
At 11 h. 37' 36" $\frac{1}{2}$ by the clock, ζ Cancri immersed behind the Moon's dark Limb. It was very hazy; but the Observation may, I think, be depended on. The moon set behind the high lands to the westward, before the emerfion.							
o —	9.	58 3 $\frac{3}{4}$	58 45 $\frac{3}{4}$	o 59 28 $\frac{1}{2}$	o 11 $\frac{3}{4}$		o's 1st Limb.
			o 55	1 1 38 $\frac{1}{2}$	2 22	3 3 $\frac{1}{2}$	o's 2d Limb.
		14 55 $\frac{1}{2}$	15 37 $\frac{1}{2}$	7 16 20 $\frac{1}{4}$	17 4	17 45 $\frac{1}{4}$	Procyon.
		18 45	19 32 $\frac{1}{2}$	7 20 21	21 10 $\frac{1}{4}$	21 57 $\frac{3}{4}$	Pollux.
		29 46 $\frac{1}{2}$	30 31	8 31 16 $\frac{1}{4}$	32 2 $\frac{1}{2}$	32 46 $\frac{1}{2}$	ν 's 1st Limb.
				8 33 47 $\frac{1}{2}$			2d o Cancri.
At 9 h. 14' 57" $\frac{1}{2}$ 2da ad o Cancri immersed behind the ν . It was hazy, and strong wind, which shook the Telescope much; but I think the Observation pretty good. I could not see the emerfion.							
d —	10.	43 41 $\frac{1}{4}$	44 21 $\frac{1}{2}$	9 45 8 $\frac{1}{3}$	45 52 $\frac{1}{2}$	46 35	Regulus.
		1 o	1 42 $\frac{3}{4}$	1 2 25 $\frac{7}{8}$	3 9 $\frac{1}{2}$		o's 1st Limb.
			3 52 $\frac{1}{2}$	4 35 $\frac{1}{2}$	5 19 $\frac{1}{8}$	6 1	o's 2d Limb.
		14 12 $\frac{3}{4}$	14 55	7 15 38	16 21 $\frac{1}{2}$	17 3 $\frac{1}{2}$	Procyon.
			15 33 $\frac{3}{4}$	7 16 16 $\frac{1}{2}$	17 o		Small * following Procyon.
		18 1 $\frac{1}{2}$	18 49	7 19 38	20 27	21 14 $\frac{1}{4}$	Pollux.
			3 53 $\frac{1}{2}$	9 4 36	5 19 $\frac{1}{2}$		α Hydræ.
			16 28	9 17 11 $\frac{1}{3}$	17 55 $\frac{1}{3}$		o Leonis.
		18 53 $\frac{1}{2}$	19 37	9 20 21 $\frac{7}{8}$	21 7 $\frac{1}{2}$	21 51	ν 's 1st Limb.
		42 59	43 41 $\frac{3}{4}$	9 44 25 $\frac{1}{2}$	45 9 $\frac{1}{7}$	45 52 $\frac{1}{4}$	Regulus.
			24 49 $\frac{1}{2}$	11 25 35	26 20		β Leonis.
d —	11.			7 7 33 $\frac{1}{3}$			Castor.
		13 32	14 14	7 14 56 $\frac{1}{2}$		16 22	Procyon.
g —	12.	6 57 $\frac{3}{4}$	7 40	1 8 23 $\frac{3}{4}$	9 7 $\frac{1}{4}$		o's 1st Limb.
			9 52 $\frac{1}{2}$	1 10 33 $\frac{1}{3}$	Cloudy		o's 2d Limb.
		1 50	2 32 $\frac{1}{2}$	9 3 15 $\frac{3}{4}$	3 59 $\frac{1}{2}$	4 40 $\frac{3}{4}$	α Hydræ. Cloudy.
		55 57:	56 40	10 57 24 $\frac{1}{4}$	58 8	58 50:	ν 's 1st L. Exceeding foggy and cloudy.
In the morning, I found that the Transit Instrument deviated from the mark about the breadth of the wire: Re adjusted it.							

Observations at the Cape of Good Hope, Continued.

Observed Times of the Transits of the Sun, Moon and Stars over the Meridian.

1775.	Times by the Clock B.					Phenomena, &c.
	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	" "	" "	H " "	" "	" "	
♂ April 18.	14 1	14 46:	16 15 32 $\frac{1}{2}$	16 17 $\frac{1}{2}$	Clouds.	♂'s 2d Limb.
	4 54 $\frac{3}{4}$	5 36 $\frac{3}{4}$	17 6 21 $\frac{1}{2}$	7 5 $\frac{1}{2}$	7 48	α Ophiuchi.
♂ — 19.	27 27 $\frac{3}{4}$	28 10	1 28 53 $\frac{3}{4}$			☉'s 1st Limb.
			31 4 $\frac{1}{8}$	31 48 $\frac{1}{4}$	32 30 $\frac{3}{8}$	☉'s 2d Limb.
	59 58	0 47 $\frac{1}{4}$	7 1 38 $\frac{1}{2}$	2 29	3 18 $\frac{1}{2}$	Castor.
	7 31 $\frac{1}{2}$	8 14:	7 8 56 $\frac{1}{4}$	9 40	10 22	Procyon.
	11 20	12 8 $\frac{1}{2}$	7 12 56 $\frac{1}{2}$	13 45 $\frac{3}{4}$	14 33	Pollux.
	4 12 $\frac{1}{2}$	4 55 $\frac{1}{4}$	17 5 39	6 23 $\frac{1}{4}$	7 6	α Ophiuchi.
	8 9:	8 50 $\frac{1}{2}$	17 9 33 $\frac{1}{2}$	10 16 $\frac{1}{8}$	10 58	†
	14 8 $\frac{3}{4}$	14 54 $\frac{1}{4}$	17 15 40 $\frac{1}{8}$	16 27	17 12	♂'s 2d Limb.
		26 4 $\frac{1}{4}$	17 26 48 $\frac{3}{4}$	27 34		These three Stars are in the telescope together, and nearly in the same parallel of declination; the middle one is (I believe) the 394th in La Caille's Catalogue.
	27 59 $\frac{3}{4}$	28 43 $\frac{1}{2}$	17 29 28	30 13		
		31 40 $\frac{1}{4}$	17 32 25	33 10		
		8 2	18 8 56 $\frac{1}{2}$	9 52		Small * preceding α Lyræ.
	8 38	9 31 $\frac{1}{2}$	18 10 26	11 21 $\frac{1}{4}$	12 14	α Lyræ.
♂ — 20.	30 27 $\frac{1}{2}$	31 10	1 31 53 $\frac{3}{4}$			☉'s 1st Limb.
			34 5	34 48 $\frac{1}{2}$	35 31	☉'s 2d Limb.
	59 16 $\frac{1}{2}$	0 6 $\frac{1}{8}$	7 0 56 $\frac{1}{2}$	1 47 $\frac{1}{2}$	2 36 $\frac{1}{2}$	Castor.
	6 49 $\frac{1}{2}$	7 32 $\frac{3}{4}$	7 8 14 $\frac{1}{2}$	8 57 $\frac{1}{2}$	9 39 $\frac{1}{2}$	Procyon.
	10 38 $\frac{1}{2}$	11 26 $\frac{1}{4}$	7 12 15	13 4	13 51	Pollux.
♂ — 21.			1 34 56 $\frac{1}{2}$	35 39 $\frac{1}{2}$		☉'s 1st Limb.
		36 22 $\frac{1}{2}$	37 6 $\frac{1}{2}$			☉'s 2d Limb.
		59 23 $\frac{1}{8}$	7 0 14	1 5		Castor.
		6 49	7 7 32	8 15 $\frac{1}{2}$		Procyon.
	9 56	10 43 $\frac{3}{4}$	7 11 32	12 21 $\frac{1}{2}$	13 8 $\frac{1}{2}$	Pollux.
♂ — 22.	42 39		19 44 9 $\frac{1}{2}$		45 39	1ma ad α } Capricorni.
		43 49	19 44 33 $\frac{1}{2}$	45 18		2da ad α }
		46 26	19 47 10 $\frac{1}{4}$	47 54 $\frac{3}{4}$		Small * following them.
	17 23 $\frac{1}{2}$	18 8 $\frac{1}{2}$	20 18 53 $\frac{1}{2}$	19 39 $\frac{1}{2}$	20 23 $\frac{1}{4}$	♂'s 2d Limb.
☉ — 23.	39 35 $\frac{1}{2}$	40 18 $\frac{3}{4}$	1 41 2 $\frac{1}{2}$	41 46 $\frac{7}{8}$		☉'s 1st Limb.
		42 29 $\frac{1}{2}$	43 13 $\frac{1}{2}$	43 57 $\frac{1}{4}$	44 40	☉'s 2d Limb.
	16 7 $\frac{3}{4}$	16 51 $\frac{1}{2}$	21 17 36 $\frac{1}{2}$	18 20 $\frac{3}{4}$	19 5 $\frac{1}{2}$	♂'s 2d Limb.
♂ — 24.	42 40	43 23	1 44 6 $\frac{3}{4}$	44 50 $\frac{1}{2}$		☉'s 1st Limb.
		45 33 $\frac{3}{4}$	46 17 $\frac{1}{2}$	47 1 $\frac{7}{8}$	47 44 $\frac{1}{2}$	☉'s 2d Limb.
♂ — 25.	45 44 $\frac{1}{4}$	46 27:	1 47 10 $\frac{3}{4}$	47 55 $\frac{1}{4}$		☉'s 1st Limb.
		48 38	49 22 $\frac{1}{2}$	50 6 $\frac{1}{8}$		☉'s 2d Limb.

† This Star, as far as I can find, is not in any catalogue: it may be about the sixth magnitude, and its zenith distance at the Cape, as shewn by the index of the transit instrument, was 33° 30', or thereabouts; consequently its declination will be about 0° 26' S. and its right ascension 17 h. 29' 21 $\frac{1}{4}$.

Observations at the Cape of Good Hope, Continued.

Observations of Meridian Altitudes of the Sun and Stars.

1775.	Zenith Distances.				Exterior Arch reduced.	Barom.	Thermom.		Phenomena and Remarks.
	Interior Arch.	Exterior Arch.					In Doors.	Out.	
		°	'	"					
♀ April 7	41 2 4	43 3 3	15	41 2 30	29,98	76	75	☉'s L. L.	
☉ — 9.	41 14 45	44 0 0	17	41 15 17	30,01	72½	75⅓	☉'s U. L.	
♂ — 11.	17 30 0	18 2 21	16	17 30 7	29,87	70⅓	65¾	Syrius.	
	66 15 0	70 2 22	6	66 15 23½	29,87	70	65	Castor.	
	39 41 55	42 1 12	20	39 42 10	29,87	70	65	Procyon.	
♀ — 12.	42 52 53	45 2 31	20	42 53 20	30,02	68¼	69	☉'s U. L.	
	19 58 5	21 1 6	0	19 57 57	30,04	69	63¼	♂ Navis. } Cloudy.	
	34 52 12	37 0 25	16	34 52 30	30,04	69	63¼	β — }	
♂ — 13.	42 43 15	45 2 9	20	42 43 40	30,02	68½	68½	☉'s U. L.	
	43 15 27	46 0 18	22	43 15 46½				☉'s L. L.	
	17 30 12	18 2 22	5	17 30 22½	29,98	69¼	66	Syrius.	
	39 42 5	42 1 13	4	39 42 20½	29,97	69	64½	Procyon.	
	62 26 53	66 2 15	14	62 27 27	29,97	69	64½	Pollux.	
	5 27 10	5 3 10	8	5 27 58				ζ Navis.	
	12 45 20	13 2 14	0	12 45 31½				γ.	
	19 57 45	21 1 6	10	19 58 7	29,97	69	63	δ.	
	34 51 20	37 0 23	17	34 51 38½				β.	
	24 34 22	26 0 27	16	24 34 38				η.	
♀ — 14.	39 42 8	42 1 13	13	39 42 29½	30,01	67½	64	Procyon.	
	62 27 15	66 2 15	8	62 27 21				Pollux.	
	5 27 52	5 3 11	10	5 28 26				ζ Navis.	
	12 45 7	13 2 15	5	12 46 03	30,0	67	63	γ.	
	19 58 5	21 1 7	10	19 58 33				δ.	
	34 51 50	37 0 23	20	34 51 41½				β.	
♂ — 15.	39 42 0	42 1 12	18	39 42 08	29,99	68½	64	Procyon.	
	62 26 57	66 2 15	23	62 27 36				Pollux.	
	34 52 0	37 0 25	8	34 52 22	29,97	68½	63½	β Navis.	
☉ — 16.	44 19 55	47 1 5	5	44 20 0½	30,0	67¾	69¾	☉'s L. L.	
	5 27 37	5 3 11	6	5 28 22	29,94	68	64	ζ Navis.	
♂ — 17.	5 26 50	5 3 9	0	5 27 23½	30,0	67¼	61⅔	ζ Navis.	
	12 45 8	13 2 14	10	12 45 41½	30,0	67¼	61⅔	γ.	
	19 57 50	21 1 6	6	19 58 3	30,0	67¼	61½	δ.	
	34 51 37	37 0 23	10	34 51 31½	30,01	68	61¼	β.	
	24 34 38	26 0 27	22	24 34 44	30,01	67	61	η.	
♂ — 18	39 42 7	42 1 13	8	39 42 24½				Procyon.	
	5 26 30	5 3 9	10	5 27 33½	30,18	66	63	ζ Navis.	
	12 45 4	13 2 14	0	12 45 31½				γ.	
	19 58 0	21 1 7	8	19 58 31	30,18	66	62¾	δ.	
	34 51 5	37 0 23	7	34 51 28½				β.	
♀ — 19.	45 22 15	48 1 19	8	45 22 32½	30,18	67	70	☉'s L. L.	
	44 49 37	47 3 9	15	44 50 08½				☉'s U. L.	
	34 52 0	37 0 25	5	34 52 19	30,0	69	69	β Navis.	
	24 34 15	26 0 27	22	24 34 44				η Navis.	

Observations at the Cape of Good Hope, Continued.

Observations for the Error of the Line of Collimation, made with the Board as formerly.

	Zenith distance of the upper hole: the quadrant direct.			Zenith distance of the lower hole: the quadrant inverted.		
	Interior Arch.		Exterior Arch. G. S. V. +"	Interior Arch.		Exterior Arch. G. S. V. +"
	°	' "		°	' "	
	87 49 22		93 2 22 13	92 11 27		98 1 10 22
	7		22 6	5		10 20
	20		22 16	15		10 20
	0		22 20	0		10 5
	20		22 13	20		10 15
	5		22 20	23		10 20
Means.	87 49 12 $\frac{1}{2}$		93 2 22 14 $\frac{2}{3}$	92 11 15		98 1 10 17
	87 49 0		93 2 22 12	92 10 30		98 1 9 6
	10		23 0	20		9 0
	0		23 0	38		9 18
	12		23 5	5		9 0
	0		22 16	30		9 16
	0		22 18	20		9 0
				50		9 20
Means.	87 49 3 $\frac{2}{3}$		93 2 22 21,7	92 10 27 $\frac{1}{2}$		98 1 9 8 $\frac{1}{2}$
	87 48 52		93 2 22 6	92 10 38		98 1 10 11
	49 30		23 20	11 5		10 5
	48 45		22 5	11 0		10 0
	48 50		22 0	10 55		9 15
				10 40		10 8
	87 48 59 $\frac{1}{4}$		93 2 22 14 $\frac{1}{3}$	92 10 51 $\frac{1}{2}$		98 1 10 2 $\frac{1}{2}$

The Quadrant was inverted between every set, as the means are here taken, and of course the Observations give nine comparisons for each arch of the Quadrant; the mean result of which gives 1",8 to be added to the interior arch, and 8" $\frac{1}{2}$ to be subtracted from the exterior arch.

Observations at the Cape of Good Hope, Continued.

Computations of the Latitude, from the foregoing Observations.

1775.	Latitude by		Declination.
	Interior Arch.	Exterior Arch.	
By Observations of the Sun.			
♀ April 7.	33 55 48 $\frac{1}{2}$	33 56 5	6 50 58 N.
☉ — 9.	33 55 43 $\frac{1}{2}$	33 56 5	7 35 46
♂ — 12.	33 55 45 $\frac{1}{2}$	33 55 58	8 42 0
♂ — 13.	33 56 21	33 56 33	9 3 47
☉ — 16.	33 56 3	33 56 31	10 8 15
♂ — 19.	33 55 34 $\frac{1}{2}$	33 55 49 $\frac{1}{2}$	11 11 12 $\frac{1}{2}$
	33 55 53 $\frac{1}{2}$	33 56 10 $\frac{1}{8}$	Means.
By Observations of Procyon.			
♂ April 11.	33 55 39	33 55 44	5 57 16 N.
♂ — 13.	33 55 49	33 55 54 $\frac{1}{2}$	
♀ — 14.	33 55 52	33 56 3 $\frac{1}{2}$	
♂ — 15.	33 55 44	33 55 42	
♂ — 18.	33 55 51	33 55 58 $\frac{1}{2}$	
	33 55 47	33 55 52 $\frac{1}{2}$	Means.
By Observations of Pollux.			
♂ April 13.	33 55 45 $\frac{1}{2}$	33 56 8 $\frac{1}{2}$	28 33 01 N.
♀ — 14.	33 56 6 $\frac{1}{2}$	33 56 2 $\frac{1}{2}$	
♂ — 15.	33 55 48 $\frac{1}{2}$	33 56 17 $\frac{1}{2}$	
	33 55 53 $\frac{1}{2}$	33 56 9 $\frac{1}{2}$	Means.
By Observations of ζ Navis.			
♂ April 13.	33 55 48 $\frac{1}{2}$	33 55 10 $\frac{1}{2}$	39 22 43 S.
♀ — 14.	33 55 6 $\frac{1}{2}$	33 54 42 $\frac{1}{2}$	
☉ — 16.	33 55 21 $\frac{1}{2}$	33 54 46 $\frac{1}{2}$	
♂ — 17.	33 56 10 $\frac{1}{2}$	33 55 35	
♂ — 18.	33 56 8 $\frac{1}{2}$	33 55 35 $\frac{1}{2}$	
	33 55 43	33 55 10	Means.
By Observations of γ Navis.			
♂ April 13.	33 55 41 $\frac{1}{2}$	33 55 39 $\frac{1}{2}$	46 40 51,8 S.
♀ — 14.	33 55 54 $\frac{1}{2}$	33 55 8 $\frac{1}{2}$	
♂ — 17.	33 55 53 $\frac{1}{2}$	33 55 29 $\frac{1}{2}$	
♂ — 18.	33 55 57 $\frac{1}{2}$	33 55 39 $\frac{1}{2}$	
	33 55 51 $\frac{1}{2}$	33 55 29 $\frac{1}{3}$	
By Observations of δ Navis.			
♀ April 12.	33 55 20 $\frac{1}{2}$	33 55 38 $\frac{1}{2}$	53 53 24 $\frac{1}{2}$ S.
♂ — 13.	33 55 40 $\frac{1}{2}$	33 55 28 $\frac{1}{2}$	
♀ — 14.	33 55 20 $\frac{1}{2}$	33 55 2 $\frac{1}{2}$	
♂ — 17.	33 55 35 $\frac{1}{2}$	33 55 32 $\frac{1}{2}$	
♂ — 18.	33 55 25 $\frac{1}{2}$	33 55 4	
	33 55 28 $\frac{1}{2}$	33 55 21 $\frac{1}{2}$	Mean.

1775.	Latitude by		Declination.
	Interior Arch.	Exterior Arch.	
By Observations of Sirius.			
♂ April 11.	33 55 57 $\frac{1}{2}$	33 55 54 $\frac{1}{2}$	16 25 18 $\frac{1}{2}$
♂ — 13.	33 56 9 $\frac{1}{2}$	33 56 10	
	33 56 3 $\frac{1}{2}$	33 56 2 $\frac{1}{2}$	Mean.
By an Observation of Castor.			
♂ April 11.	33 55 38	33 55 51 $\frac{1}{2}$	32 21 32 $\frac{1}{3}$ N.
By Observations of β Navis.			
♂ — 12.	33 55 11 $\frac{1}{2}$	33 55 1 $\frac{1}{2}$	68 47 41 S.
♂ — 13.	33 56 2	33 55 53 $\frac{1}{2}$	
♀ — 14.	33 55 31 $\frac{1}{2}$	33 55 50 $\frac{1}{2}$	
♂ — 15.	33 55 22	33 55 10	
♂ — 17.	33 55 45	33 56 0 $\frac{1}{2}$	
♂ — 18.	33 56 17	33 56 03 $\frac{1}{2}$	
♂ — 19.	33 55 22 $\frac{1}{2}$	33 55 13 $\frac{1}{2}$	
	33 55 38 $\frac{1}{2}$	33 55 36 $\frac{1}{2}$	
By Observations of η Navis.			
♂ April 13.	33 55 58	33 55 52 $\frac{1}{2}$	58 30 32 S.
♂ — 17.	33 55 42 $\frac{1}{2}$	33 55 46 $\frac{1}{2}$	
♂ — 19.	33 56 5 $\frac{1}{2}$	33 55 46 $\frac{1}{2}$	
η Navis.	33 55 55 $\frac{1}{3}$	33 55 48 $\frac{1}{2}$	Mean.
β — .	33 55 38 $\frac{1}{2}$	33 55 36 $\frac{1}{2}$	Ditto.
δ — .	33 55 28 $\frac{1}{2}$	33 55 21 $\frac{1}{2}$	Ditto.
γ — .	33 55 51 $\frac{1}{2}$	33 55 29 $\frac{1}{3}$	Ditto.
ζ — .	33 55 43	33 55 10	Ditto.
Southern *'s.			
	33 55 43 $\frac{1}{2}$	33 55 29	Mean.
The Sun.	33 55 53 $\frac{1}{2}$	33 56 10 $\frac{1}{8}$	Mean.
Syrius.	33 56 3 $\frac{1}{2}$	33 56 2 $\frac{1}{8}$	Ditto.
Castor.	33 55 38	33 55 51 $\frac{1}{2}$	Ditto.
Procyon.	33 55 47	33 55 52 $\frac{1}{2}$	Ditto.
Pollux.	33 55 53 $\frac{1}{2}$	33 56 9 $\frac{1}{2}$	Ditto.
Northern *'s.			
Southern ditto.	33 55 51	33 56 1 $\frac{1}{2}$	Mean.
	33 55 43 $\frac{1}{2}$	33 55 29	Ditto.
Mean of both.			
	33 55 47 $\frac{1}{4}$	33 55 45 $\frac{1}{10}$	S. Latitude. Messrs. Maſon and Dixon. Abbé de la Caille. Mr. Bayley.
	33 55 45 $\frac{1}{10}$	Exterior Arch.	
	33 55 46 $\frac{1}{8}$		
	33 55 42 $\frac{1}{2}$		
	33 55 39 $\frac{1}{4}$		
	33 55 30		

Observations at the Cape of Good Hope, Continued.

Computations of the Clock's Rate of going.

1775.	Time of ap- parent Noon by the Clock.	Syderial Time of apparent Noon.	Difference.	Clock loses.
	H " "	H " "	" " "	" "
♀ March 24.	21 33 15,73	0 13 18,71	160 2,98	
♂ — 25.	21 36 12,22	0 16 56,71	160 44,49	41,51
☉ — 26.	21 39 7,95	0 20 35,43	161 27,48	42,99
♂ — 27.	0 22 28,60	0 24 13,24	1 44,64	
♂ — 28.	0 25 24,71	0 27 51,13	2 26,42	41,78
♀ — 29.	0 28 19,36	0 31 28,13	3 8,77	42,35
♂ — 30.	0 31 14,19	0 35 07,13	3 52,97	44,20
♀ — 31.	0 34 10,68	0 38 45,22	4 34,54	41,57
♂ April 1.	0 37 05,75	0 42 23,32	5 17,57	43,03
☉ — 2.	0 40 0,27	0 46 01,61	6 01,34	43,18
♂ — 5.	0 48 46,31	0 56 57,19	8 10,88	44,70
♂ — 6.	0 51 40,50	1 0 36,08	8 55,58	42,12
♀ — 7.	0 54 37,38	1 4 15,08	9 37,70	41,94
☉ — 9.	1 0 32,08	1 11 33,66	11 01,58	42,60
♂ — 10.	1 3 29,16	1 15 13,34	11 44,18	40,3
♂ — 13.	1 12 29,72	1 26 14,0	13 44,28	41,05
♂ — 15.	1 18 29,49	1 33 35,87	15 06,38	
	Clock stopped.			
♂ — 17.	1 23 54,40	1 40 59,34	17 4,94	41,73
♂ — 18.	1 26 54,84	1 44 41,51	17 46,67	39,0
♀ — 19.	1 29 58,52	1 48 24,19	18 25,67	42,54
♂ — 20.	1 32 59,05	1 52 7,26	19 8,21	41,57
☉ — 23.	1 42 6,37	2 3 19,29	21 12,92	

Comparisons of the Transit Instrument with equal Altitudes.

1775.	Noon by equal Al- titude.	The ☉ passed the Transit Instru- ment.	Difference.	Error of the Instru- ment.
	H " "	H " "	" " "	" "
☉ March 26.	21 39 07,95	21 35 52,44	3 15,51	82 50
	Altered the Instrument.			
♂ — 27.	0 22 28,60	0 22 38,91	0 10,31	4 20
	Altered the Instrument.			
♂ — 28.	0 25 24,71	0 25 30,41	0 5,70	2 22
♀ — 29.	0 28 19,36	0 28 24,94	0 5,58	2 18
♂ — 30.	0 31 14,16	0 31 19,66	0 5,50	2 17
	Moved the Instrument.			
♀ — 31.	0 34 10,68	0 34 12,55	0 1,87	0 45
♂ April 1.	0 37 5,75	0 37 8,25	0 2,50	1 0
☉ — 2.	0 40 0,27	0 40 2,53	0 2,26	0 54
♀ — 5.	0 48 46,31	0 48 49,0	0 2,69	1 2
♂ — 6.	0 51 40,50	0 51 44,06	0 3,56	1 21
	Moved the Instrument.			
♀ — 7.	0 54 37,38	0 54 38,38	0 1,0	0 23
☉ — 9.	1 0 32,08	1 0 33,47	0 1,39	0 31½
♂ — 10.	1 3 29,16	1 3 30,78	0 1,62	0 36
♂ — 13.	1 12 29,72	1 12 29,83	0 0,11	0 3
♂ — 15.	1 18 29,49	1 18 31,04	0 1,55	0 33
♂ — 17.	1 23 54,40	1 23 54,79	0 0,39	0 8½
♀ — 19.	1 29 58,52	1 29 59,08	0 0,56	0 12
♂ — 20.	1 32 59,05	1 32 59,29	0 0,24	0 5
☉ — 23.	1 42 06,37	1 42 7,94	0 1,57	0 31

The difference between the rates of the Clock's going now, and when here in November 1772, is very extraordinary; but cannot, I think, be imputed to any absolute alteration in the length of the pendulum, as it had never been altered, in any respect, after the Clock was set up at Dusky Bay; and although before that time it was always altered, in order to its being packed up, yet on setting it up again, it was constantly brought back to its proper length, by means of a scratch on the rod, and the numbers on the nut. But, notwithstanding, I think it highly probable that the cause does not lie there, I am utterly unable to assign any other satisfactory one; and the most likely hint I am able to give, after the closest examination, is, that all the time the Clock was now going here, the principal play, or bending of the pendulum spring was down quite at the lower part of it: whether or no it had always been so, or that the principal yielding of the spring had formerly been in some part higher up, which was now grown stiff with rust, I must confess I cannot tell, as a thought of this kind did not occur to me before. It is worthy observation, that the Clock went somewhat faster the second time it was at Otaheite, than it did the first, and the difference was yet greater at Queen Charlotte's Sound.

Observations at the Cape of Good Hope, Continued.

Computations of the Rate which Mr. Kendall's Watch went at.

1775.	Time of ap- parent Noon by the Clock.	Time by Clock when the Watch was com- pared.	Time from Noon by the Clock.	Clock gains on the Watch.	Time from Noon by the Watch.	Time by the Watch when compared.	Time of ap- parent Noon by the Watch.	Mean Time of apparent Noon.	The Watch too slow for mean Time.	Watch gains per Day.
	H "	H "	" "	" "	" "	H "	H "	H "	H "	" "
♀ March 24.	21 33 15,73	21 57 0	23 44,27	2,99	23 41,28	23 15 51 $\frac{3}{4}$	22 52 10,47	24 6 26,05	1 14 15,58	13,33
h — 25.	21 36 12,22	21 14 4 $\frac{1}{4}$	22 7,97	2,77	22 5,20	22 30 0	22 52 5,20	24 6 7,45	1 14 2,25	13,61
☉ — 26.	21 39 7,95	21 45 8 $\frac{1}{2}$	6 0,55	0,76	5 59,79	22 58 0	22 52 00,21	24 5 48,85	1 13 48,64	14,37
☽ — 27.	0 22 28,60	0 40 35	18 6,40	2,27	18 04,13	23 10 0	22 51 55,87	24 5 30,14	1 13 34,27	11,34
♂ — 28.	0 25 24,71	0 32 36	7 11,29	0,91	7 10,38	22 59 0	22 51 48,62	24 5 11,55	1 13 22,93	14,26
♀ — 29.	0 28 19,36	0 38 36 $\frac{1}{4}$	10 16,89	1,17	10 15,72	23 2 0	22 51 44,28	24 4 52,95	1 13 8,67	13,86
☽ — 30.	0 31 14,16	0 37 35 $\frac{1}{2}$	6 21,34	0,97	6 20,37	22 58 0	22 51 39,63	24 4 34,44	1 12 54,81	15,62
♀ — 31.	0 34 10,68	0 43 35	9 24,32	1,17	9 23,15	23 1 0	22 51 36,85	24 4 16,04	1 12 39,19	11,21
h April 1.	0 37 5,75	1 16 41	39 35,25	5,00	39 30,25	23 31 0	22 51 29,75	24 3 57,73	1 12 27,98	12,77
☉ — 2.	0 40 0,27	0 45 36 $\frac{3}{4}$	5 36,48	0,70	5 35,78	22 57 0	22 51 24,22	24 3 39,43	1 12 15,21	13,48
☽ — 3.	0 42 55,0	0 47 36	4 41,0	0,59	4 40,41	22 56 0	22 51 19,59	24 3 21,32	1 12 1,73	12,64
♂ — 4.	0 45 50,65	0 56 37 $\frac{3}{4}$	10 47,02	1,34	10 45,68	23 2 0	22 51 14,32	24 3 3,41	1 11 49,9	14,76
♀ — 5.	0 48 46,31	1 14 38 $\frac{1}{4}$	25 51,94	3,22	25 48,72	23 17 0	22 51 11,28	24 2 45,61	1 11 34,33	12,05
☽ — 6.	0 51 40,50	0 14 30 $\frac{1}{4}$	37 10,25	4,63	37 5,62	22 14 0	22 51 5,62	24 2 27,90	1 11 22,28	13,63
♀ — 7.	0 54 37,38	1 1 36 $\frac{1}{2}$	6 59,12	0,86	6 58,26	22 58 0	22 51 1,74	24 2 10,39	1 11 8,65	14,26
☉ — 9.	1 0 32,08	1 7 37 $\frac{1}{8}$	7 5,04	0,89	7 4,15	22 58 0	22 50 55,85	24 1 35,97	1 10 40,12	12,93
☽ — 10.	1 3 29,16	1 11 38 $\frac{1}{4}$	8 9,09	1,02	8 8,07	22 59 0	22 50 51,93	24 1 19,12	1 10 27,19	13,83
♀ — 12.	1 9 28,65	1 16 42 $\frac{2}{3}$	7 14,02	0,92	7 13,10	22 58 0	22 50 46,90	24 0 46,23	1 9 59,33	13,09
☽ — 13.	1 12 29,72	1 19 46 $\frac{2}{3}$	7 16,95	0,93	7 16,02	22 58 0	22 50 43,98	24 0 30,22	1 9 46,24	11,58
♀ — 14.	1 15 28,97	1 6 48	8 40,97	1,10	8 39,87	22 42 0	22 50 39,87	24 0 14,53	1 9 34,66	11,28
h — 15.	1 18 29,49	1 24 54 $\frac{1}{2}$	6 25,01	0,81	6 24,20	22 57 0	22 50 35,80	23 59 59,18	1 9 23,38	13,22
☉ — 16.	1 20 52,70	1 27 19 $\frac{1}{2}$	6 26,80	0,81	6 25,99	22 57 0	22 50 34,01	23 59 44,17	1 9 10,16	14,38
☽ — 17.	1 23 54,40	1 56 24 $\frac{3}{4}$	32 30,35	4,10	32 26,25	23 23 0	22 50 33,75	23 59 29,53	1 8 55,78	11,22
♂ — 18.	1 26 54,84	1 35 21 $\frac{1}{4}$	8 30,41	1,09	8 29,32	22 59 0	22 50 30,68	23 59 15,24	1 8 44,56	13,71
♀ — 19.	1 29 58,52	1 35 28 $\frac{2}{3}$	5 30,15	0,70	5 29,45	22 56 0	22 50 30,55	23 59 1,40	1 8 30,85	12,23
☽ — 20.	1 32 59,5	1 43 31	10 31,95	1,33	10 30,62	23 1 0	22 50 29,38	23 58 48,0	1 8 18,62	13,84
♀ — 21.	1 36 0,50	1 54 0	17 59,50	2,28	17 57,22	23 8 28,5	22 50 30,28	23 58 35,06	1 8 4,78	13,15
☉ — 23.	1 42 6,37	1 50 35 $\frac{1}{2}$	8 29,13	1,07	8 28,06	22 59 0	22 50 31,94	23 58 10,42	1 7 38,48	

The mean of all the above gains is 13,172; the first and last days Observations give 13",236, and the mean of the two is 13",204, the gain of the watch on mean time in twenty-four hours.

Observations at the Cape of Good Hope, Continued.

Observations for the Dip of the Magnetic Needle.

1775.	Face of the Instrument.		Face of the Instrument.	
	East.	West.	East.	West.
	°	°	°	°
	46 55	45 35	43 45	46 50
	45 40	45 0	46 30	43 45
	46 30	43 30	48 15	48 45
			45 45	42 45
	Changed the Poles.		Changed the Poles.	
	43 0	46 55	47 40	44 25
	42 30	48 15	46 30	45 45
	42 30	48 50	48 35	47 45
	44 30	47 45	46 35	47 45
	47 0	45 45	45 25	43 35
	42 30	45 50	45 55	42 45
	Altered the Balance.		45 0	47 10
	Changed the Poles.		Changed the Poles.	
	43 35	48 30	43 45	44 15
	46 0	47 15	44 15	47 0
	43 0	45 35	46 30	47 0
	Altered the Balance.		43 15	49 0
	45 5	45 30	45 45	43 30
	46 35	45 55	47 35	43 10
	47 15	47 45	42 45	44 30
	46 40	46 20	43 05	44 30
			42 45	43 15
	Changed the Poles.		Changed the Poles.	
	45 15	45 20	43 35	42 55
	46 35	43 30	43 40	43 25
	47 0	42 40	42 40	42 25
	46 15	45 0	44 35	42 05
	The mean of all gives the dip of the Needle's S. end } 45 18 $\frac{3}{4}$			

Observations for the Variation of the Compass.

1775.	Variation.	Variation.	Variation.
	°	°	°
April 23.	21 10 W.	21 15 W.	21 55 W.
	21 25	21 30	21 0
	21 25	21 10	21 30
	21 10	21 15	20 50
	21 0	21 25	21 20
	20 55	21 0	21 10
	21 5	21 15	21 45
	21 15	21 10	20 40
	21 15	21 15	21 15
	21 10	21 10	21 25
	21 20	21 35	21 15
	21 35	21 0	21 10
	20 50	21 15	21 15
	21 40	21 15	21 15
	21 20	21 30	21 5
	21 25	20 50	21 15
	21 0	21 0	21 20
	21 10	21 5	21 10
	21 10	21 25	21 25
	21 10	21 0	21 15

The first two columns were obtained by placing the Compass at the Transit Instrument, and making the index bisect the meridian mark; the last was got by placing the Compass at the mark, and setting the index to cut the Transit Telescope. The mean of them all is 21° 14 $\frac{1}{2}$ W.

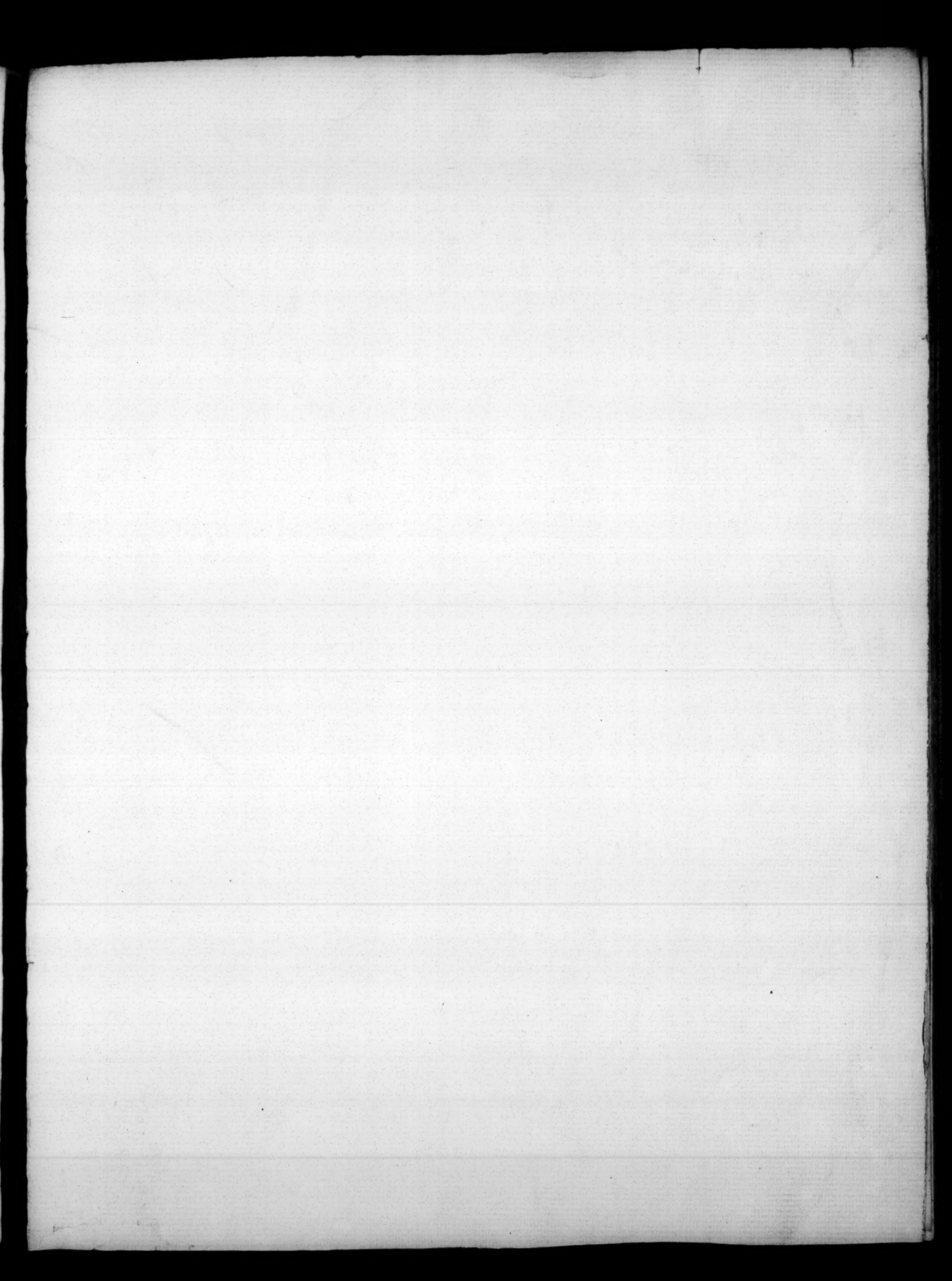
Observations made at the Cape of Good Hope, Continued.

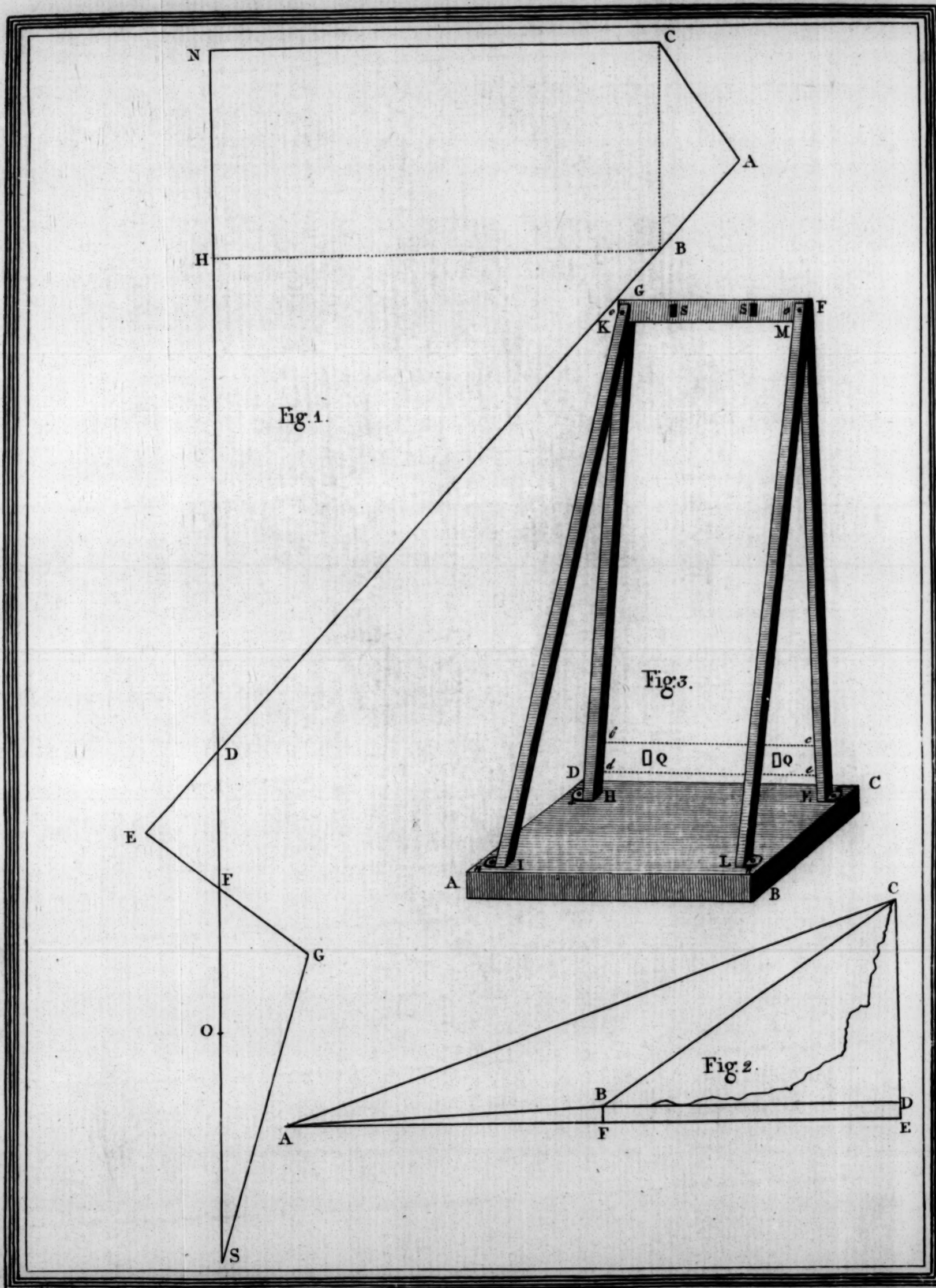
As there have been some disputes concerning the relative situation of the place where the late *Abbe de la Caille* made his Observations, with respect to that where Messrs. Maſon and Dixon, as well as Mr. Bayley and myself, observed; and, moreover, as it may alſo contribute ſomething towards the buſineſs I was employed on at the Cape of Good Hope, to determine, with accuracy, the difference of latitude and meridians between theſe places, the following account of a ſurvey, made for that purpoſe, will not, I preſume, be unacceptable.

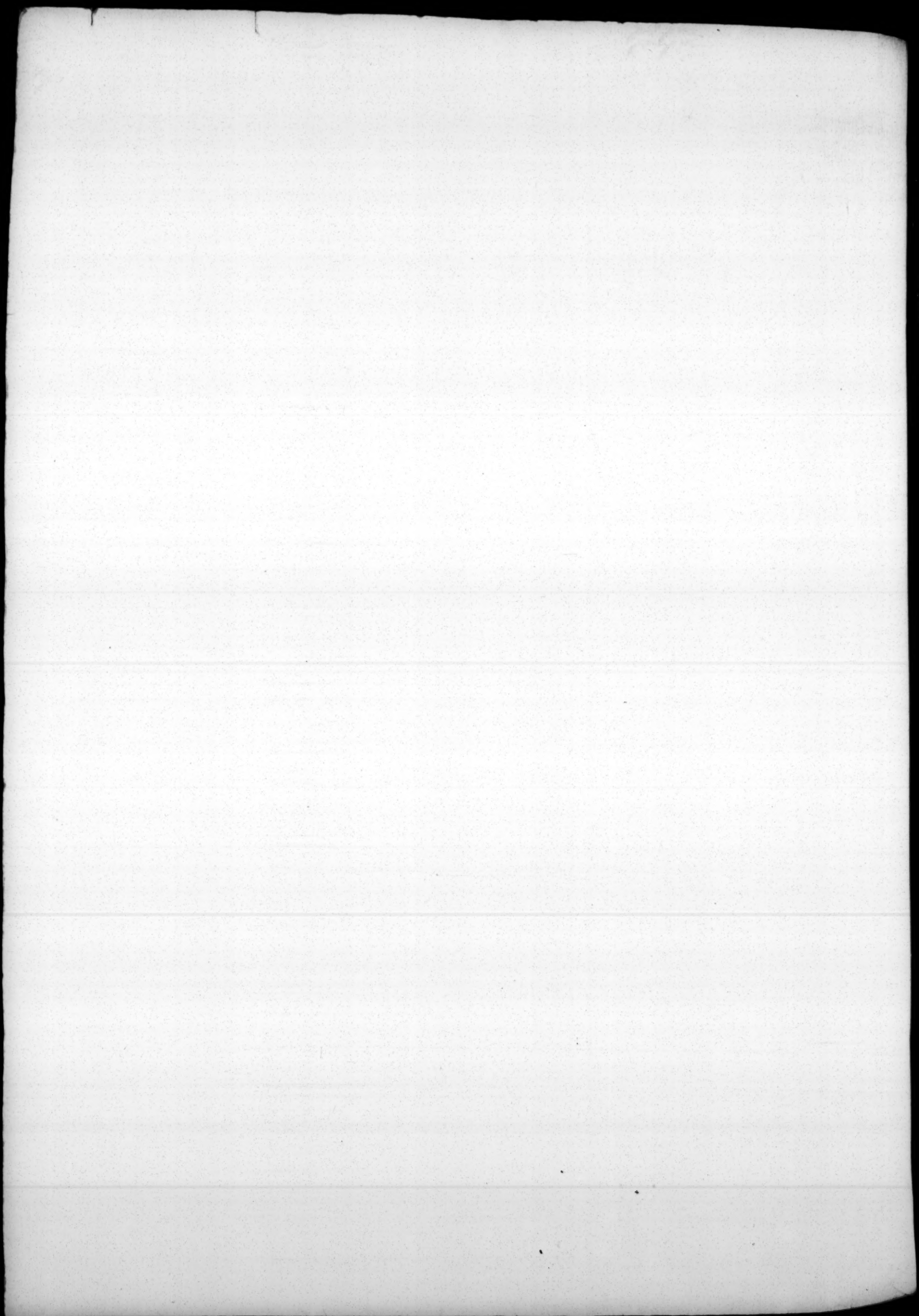
In the annexed Figure, (ſee Plate I. Fig. 1.) C is the place of the *Abbe's* Obſervatory, and O that of ours; S N is the meridian line paſſing through the latter, and S a point or mark in it, 8,84 chains to the ſouthward of the Obſervatory. The lines S G, G E, E A, and A C, which are in the directions of the ſeveral ſtreets, were carefully meaſured, as alſo the angles at S, G, E, and A. The line S G was found to be 12,26 chains (of Gunter), G E is 7,50 chains, E A 34 chains, and A C 5,64 chains. I found the inclination of the plane whereon the line O S was meaſured $1^{\circ} 25'$, of that whereon S G was meaſured $2^{\circ} 05'$; that on which G E was meaſured did not differ ſenſibly from the horizontal level; E A declined $1^{\circ} 59'$ from the plane of the horizon, and A C was nearly horizontal. I have not made any allowance for theſe elevations in the computation, whereby the following reſults were deduced, thinking them ſo ſmall as not to merit notice, but have put down the inclinations themſelves, for the ſatisfaction of ſuch perſons as may think otherwiſe. The angle at S meaſured $14^{\circ} 48' 7\frac{1}{2}''$, that at G $112^{\circ} 51' 54''$, that at E $85^{\circ} 41' 15''$, and that at A $106^{\circ} 38' 5''$. The quadrant ſhewed angles too ſmall by $18''$, as I found by Obſervations made for that purpoſe. Hence it will readily be ſeen that one ſide and all the angles are given in each triangle, from whence I found that O N, the difference of latitude, was equal to 37,69 chains, or 0,409 of a mile $= 24\frac{1}{2}''$; and that H B = N C, the meridian diſtance was 16,86 chains, or, 183 of a mile $= 13\frac{1}{2}''$ in longitude; the *Abbe's* Obſervatory being theſe quantities to the northward and eaſtward of ours.

The Mountain at this place, uſually known by the name of the *Table Mountain*, from its flat top, being one of the higheſt and moſt remarkable one's in the known world, ſo near the ſea; I thought the knowledge of its height might prove a matter acceptable to many, and perhaps be of ſome uſe in phyſical enquiries. Theſe conſiderations induced me to make the following Obſervations, which, though not on ſo large a baſe as might be wiſhed, will nevertheleſs, I hope, be ſufficient for the purpoſe: The baſe having been meaſured twice over, with the utmoſt care, on a tolerably even plane, and the two meaſurements differed only nine links of Gunter's chain from each other. The whole length of the baſe line was 50 chains, or 3300 Engliſh feet, and lay in a direct line from that part of the hill which I obſerved the altitude of.

Being thus pretty well aſſured of the length of my baſe, I placed the aſtronomical quadrant at the lower end of it, ſet the Teleſcope very nicely to 90° , allowing the error of the Quadrant, and turned it round until the middle horizontal wire cut the main-topmaſt of the *Reſolution* as ſhe lay at anchor in the bay; and when I had adjusted the plumb-line very accurately, I found that the middle wire of the Teleſcope cut the main-topmaſt about $\frac{1}{4}$ th, or $\frac{1}{3}$ d of the way up between the cap of the main-maſt and the truſſel-trees of the main-topmaſt.







Observations at the Cape of Good Hope, Continued.

I next took the following zenith distances of a mark at the upper end of the base-line, which was exactly of the same height from the ground with the center of the Quadrant, viz.

Interior Arch.			Exterior Arch.			
°	'	"	G.	S.	V.	+''
87	35	55	93	1	24	16
	36	52			26	8
	35	50			24	12
	36	5			25	10

With the Quadrant yet standing at the same place, I took the following zenith distances of the highest part of the Table Mountain: I mean that part which forms the right-hand cliff of the passage, whereby the mountain is usually ascended.

Interior Arch.			Exterior Arch.			
°	'	"	G.	S.	V.	+''
74	24	37	79	1	16	5
	24	45			16	7
	24	15			15	10

I now removed the Quadrant to the upper end of the base-line, and there took the following zenith distances of the same point of the mountain.

Interior Arch.			Exterior Arch.			
°	'	"	G.	S.	V.	+''
71	5	50	75	3	11	18
	5	30			11	10

Clouds now covered the hill, so that I could get no more of these last. The Barometer stood at 29.98, and the Thermometer at 64. It is necessary to add, that the length of the Resolution's main-mast was 70 feet 11 inches, of her main-topmast 42 feet 5 inches: 11 feet and 6 inches of the main-mast was lost in the water, the top-mast overlapped at the heel 9 feet and 10 inches, and the trussel-trees were $4\frac{1}{2}$ feet below its cap. Hence the cap of the main-mast was 59 feet and 5 inches above the surface of the sea, and the main-topmast trussel-tree $27\frac{1}{4}$ feet above that; one fourth, or one third of which may be taken at 8 feet, and then the lower end of the base will appear to be $67\frac{1}{2}$ feet, or $22\frac{1}{2}$ yards above the surface of the sea, allowing nothing for the horizontal refractions, or the curvature of the earth on the distance, which was about a mile and quarter.

If then, in Fig. 2, Plate II, A E represent an horizontal line drawn through A, the lower station; B D another drawn through the upper station, B; A B the line measure, = 3300 feet, or 1100 yards, and C D the perpendicular height of the mountain above the horizontal line B D; by taking a mean of the zenith distances shewn by the two arches of the Quadrant, and

Observations at the Cape of Good Hope, Continued.

allowing the mean astronomical refractions thereon, which may, perhaps, be a small matter more than ought to be done, B F, the perpendicular height of the second station, above the first, will come out $40\frac{2}{3}$ yards; and D C, the perpendicular height of the summit of the mountain, above the second station, $1422\frac{1}{3}$ yards; and of course the height of the mountain's summit, above the lower station, is 1463 yards; to which adding $22\frac{1}{2}$ yards, the height of the lower station above the sea, the whole height of the mountain will be $1485\frac{1}{2}$ yards.

If no refractions whatever be allowed, B F will be 46 yards, and C D 1407 yards; and the whole height of the mountain $1475\frac{1}{2}$ yards above the level of the sea.

As B C, the distance of the upper station from the top of the mountain, comes out only $4400\frac{2}{3}$ yards in one case, and $4342\frac{3}{4}$ yards in the other; the whole distance of the top of the mountain from the sea-shore cannot exceed four miles, as my first station was not quite three-fourths of a mile from it.

Observations at the Island of St. Helena, Latitude $15^{\circ} 55'$, S. Longitude $5^{\circ} 49'$, W.

Observations for the Dip of the Magnetic Needle.

1775.	Face of the In- strument.		1775.	Face of the In- strument.		1775.	Face of the In- strument.	
	East.	West.		East.	West.		East.	West.
	° ' "	° ' "		° ' "	° ' "		° ' "	° ' "
♀ May 19.	14 10	14 25	♀ May 19.	14 15	14 40	Changed the Poles.		
	14 35	14 5		14 0	13 30	10 45	8 30	
	14 50	14 10		14 0	14 0	9 0	9 50	
Mean	14 31 $\frac{1}{3}$	14 13 $\frac{1}{3}$	Mean	13 44 $\frac{1}{6}$	13 22 $\frac{1}{2}$	9 5	8 35	
Changed the Poles.			Changed the Poles and altered the Balance.			8 45	8 45	
	9 50	8 45	May 20.	12 30	11 40	8 55	8 45	
	10 0	8 45		12 40	11 30	8 50	8 45	
Mean	9 55	8 45		13 5	13 0	Mean Mean of all the means Dip of the Needle's fourth end	9 13 $\frac{1}{3}$	8 52
Altered the Balance.				13 15	13 30		11 29 $\frac{3}{7}$	11 20 $\frac{3}{4}$
	11 05	10 45		13 0	13 45		11 25 $\frac{1}{4}$	
	9 30	10 45	13 15	12 35				
Mean	10 17 $\frac{1}{2}$	10 45	13 0	13 05				
Changed the Poles.			12 30	12 35				
	13 55	12 5	13 15	12 30				
	13 10	13 40	13 10	12 25				
	13 5	12 20	Mean	12 58	12 27 $\frac{1}{2}$			

Other Observations.

1775.	Time by the Watch K.	Apparent Time.	Double Altitude of the $\odot$'s L.L.	Error of the Quadrant.	Therm.	Latitude.	Longitude by the Watch.	
	H	H	°	"		°	'	
24 May 18.		Noon	108 31	—1 $7\frac{1}{2}$	75 $\frac{3}{4}$	15 55 16		
2 — 19.	22 18 $5\frac{1}{2}$	21 48 18,1	82 26	—0 30	76 $\frac{1}{4}$	—	5 47 22 $\frac{1}{2}$	West.
	18 45		82 38					
	19 14		82 $47\frac{1}{2}$					
	19 $40\frac{1}{2}$		82 $56\frac{1}{4}$					
	20 5		83 $3\frac{3}{4}$					
	20 34	Noon	83 $13\frac{3}{4}$	—0 42	76	15 55 28		
6 — 20.			107 $38\frac{3}{4}$					

Observations at the Island of Ascension, Latitude $7^{\circ} 56\frac{1}{4}'$ S. Longitude $14^{\circ} 32\frac{1}{2}'$ W.

Observations for the Dip of the Magnetic Needle.

1775.	Face of the Instru- ment.		1775.	Face of the Instru- ment.	
	East.	West.		East.	West.
	0 "	0 "		0 "	0 "
» May 29.	9 40	8 0	» May 29.	9 15	10 0
	9 15	8 30		9 15	9 15
	9 10	8 25		9 10	9 0
	8 45	8 30		9 0	9 30
	9 30	8 30		9 0	9 10
	9 20	8 40		9 05	8 30
Mean	9 16 $\frac{2}{3}$	8 25 $\frac{5}{8}$		9 10	8 45
	Changed the Poles.		Mean	9 7 $\frac{3}{5}$	9 10
	10 15	10 0	3d ditto	9 13	8 28
	9 40	7 10	2d ditto	9 28 $\frac{1}{3}$	8 28 $\frac{1}{3}$
	8 30	8 15	1st ditto	9 16 $\frac{2}{3}$	8 25 $\frac{5}{8}$
Mean	9 28 $\frac{1}{3}$	8 28 $\frac{1}{3}$	Mean of all the means	9 16 $\frac{5}{12}$	8 38 $\frac{1}{24}$
	Changed the Poles.				9 16 $\frac{5}{12}$
	8 5	9 25	Dip of the Needle's North End		8 57 $\frac{1}{4}$
	10 45	8 0			
	10 5	8 40			
	8 40	7 45			
	8 30	8 30			
	9 13	8 28			

Mr. Kendall's watch gave the longitude of the ship at anchor $14^{\circ} 31' 49''$ W. I got no lunar Observations for the longitude while here; but three taken before our arrival, and reduced to this place by means of the watch, gave $14^{\circ} 58' 11''$, and twelve taken after leaving it, six of which were of the sun and moon, and six of the moon and stars, on the other side of her, gave, when reduced back by the watch, $14^{\circ} 6' 50''$: The mean of the two is $14^{\circ} 32' 30''$ W. The latitude of the ship, as she lay at anchor, was $7^{\circ} 55' 53''$ S., by a mean of three Observations; and the variation of the Compass was $10^{\circ} 52\frac{1}{2}'$ W.

N. B. The highest part of the island bore W. by N. $\frac{1}{4}$ N. by Compass, about four leagues distant.

ASTRONOMICAL OBSERVATIONS.

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Observations made at the Island of Fyal, one of the Azores.

1775.	Equal Altitudes. Times by the Watch K.			Zenith Dis- tance.	Supple- ment to the double Altitude of the ☉'s L. L.	Thermometer.	Time of apparent Noon by the Watch.	Phenomena, &c.
	Lower Wire.	Middle Wire.	Upper Wire.					
	" "	H " "	" "				H " "	
u July 13.	28 43 $\frac{3}{4}$	0 31 15 $\frac{1}{2}$	33 44	29 20 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
21 — 14.	31 47 $\frac{1}{2}$	34 19	36 47 $\frac{1}{2}$					
	18 12 $\frac{1}{4}$	4 15 42 $\frac{3}{4}$	13 15	29 20 0			2 25 02,63	☉'s L. L. } Wef- ☉'s U. L. } terly.
	21 12 $\frac{3}{4}$	18 43 $\frac{3}{4}$	16 16 $\frac{1}{4}$					
		23 57 13 $\frac{1}{4}$	59 32 $\frac{1}{2}$	35 40 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
b — 15.					34 31 47	76 $\frac{1}{2}$	2 25 24,23	Latit. 38° 32' 49" N. ☉'s L. L. } Wef- ☉'s U. L. } terly.
		4 53 28	51 8 $\frac{1}{4}$	35 40 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
	5 40 $\frac{1}{4}$	0 5 10 $\frac{1}{2}$		34 20 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
o — 16.					34 48 54	76 $\frac{1}{2}$	2 25 41,17	Latit. 38° 31' 43" N. ☉'s L. L. } Wester- ☉'s U. L. } ly.
	45 35 $\frac{1}{2}$	4 46 05		34 20 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
			20 41 $\frac{1}{2}$	55 0 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
D — 17.		22 21 11 $\frac{1}{2}$			35 9 48	76 $\frac{1}{2}$	2 26 02,04	Latit. 38° 32' 7" N. ☉'s L. L. } Wef- ☉'s U. L. } terly.
		6 30 42 $\frac{3}{4}$		55 0 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
			31 13	55 0 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
		21 —	45 36 $\frac{1}{4}$	62 0 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
			48 18 $\frac{1}{2}$					☉'s U. L. } Easter- ☉'s L. L. } ly.
	15 18 $\frac{1}{2}$	22 17 34	19 46 $\frac{1}{2}$	55 20 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
	18 2 $\frac{1}{4}$	20 15 $\frac{3}{4}$						☉'s U. L. } Easter- ☉'s L. L. } ly.
	54 34 $\frac{1}{4}$	22 56 51 $\frac{1}{2}$	59 06:	47 40 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
	57 20 $\frac{3}{4}$	59 36 $\frac{1}{2}$	1 49 $\frac{1}{2}$					☉'s U. L. } Easter- ☉'s L. L. } ly.
	4 34 $\frac{1}{4}$	0 6 57:	9 16 $\frac{3}{4}$	34 20 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
	7 26 $\frac{1}{2}$	9 50	12 13					☉'s U. L. } Easter- ☉'s L. L. } ly.
8 — 18.					35 30 45	77 $\frac{1}{2}$	2 26 19,80	Latit. 38° 32' 42" N. ☉'s L. L. } Wef- ☉'s U. L. } terly.
	45 6	4 42 42 $\frac{1}{2}$	40 18 $\frac{1}{2}$	34 20 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
	48 1 $\frac{1}{2}$:	45 36 $\frac{1}{2}$	43 14					☉'s U. L. } Easter- ☉'s L. L. } ly.
	55 8:	5 —	50 40 $\frac{1}{4}$	47 40 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
	57 54 $\frac{3}{4}$	—	53 25 $\frac{1}{2}$					☉'s U. L. } Easter- ☉'s L. L. } ly.
	34 26 $\frac{1}{2}$	6 32 14 $\frac{1}{2}$	30 01 $\frac{1}{4}$	55 20 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
	37 10	34 55 $\frac{1}{2}$	32 44 $\frac{1}{2}$					☉'s U. L. } Easter- ☉'s L. L. } ly.
		7 —	4 8 $\frac{1}{2}$	62 0 0				☉'s U. L. } Easter- ☉'s L. L. } ly.
			6 53					☉'s U. L. } Easter- ☉'s L. L. } ly.

Observations at Fyal, Continued.

Computations of the Watch's Rate of going.

1775.	Time of Noon by the Watch.	Mean Time of apparent Noon.	Watch faster than mean Time.	Watch gains on M. Time.
	H "	H "	H "	" "
♀ July 14.	2 25 2,63	0 5 19,52	2 19 43,11	15,23
h — 15.	25 24,23	0 5 25,89	19 58,34	11,11
☉ — 16.	25 41,17	0 5 31,72	20 09,45	15,50
D — 17.	26 02,04	0 5 37,09	20 24,95	12,80
♂ — 18.	26 19,80	0 5 42,05	20 37,75	

The mean of these four is $13''$,66; but if a mean of all the comparisons which can be formed out of the five Observations be taken, its gain on mean time will be $13,528$. The longitude shewn by the watch is $28^{\circ} 56' 20''$ W. or $47^{\circ} 19' 35''$ west of the Cape of Good Hope. I had no lunar Observations here for the longitude; but a mean of 15 taken before we arrived here, gave $28^{\circ} 1' 44''\frac{1}{2}$ when brought on by the watch; and eight taken after leaving it, and carried back by the watch, gave $28^{\circ} 46' 42''\frac{1}{2}$. The mean of the two is $28^{\circ} 24' 13''\frac{1}{2}$ west.

Observations for the Variation of the Compass:

1775.	Zenith Distance of the Sun.	Azimuth of the Sun's Center.	Variation West.
	°	°	°
D July 17.	62 28 $\frac{1}{2}$ U. L.	N. 62 05 W.	
	43 $\frac{3}{4}$	61 45	
	54	61 25	
	63 3 $\frac{3}{4}$	61 20	21 57 $\frac{1}{2}$
	19 $\frac{3}{4}$	61 0	
♂ — 18.	56 51 L. L.	N. 66 45 W.	
	57 13 $\frac{1}{2}$	64 15	
	57 13 $\frac{1}{2}$	66 55	22 40 $\frac{1}{4}$
	57 24 $\frac{1}{2}$	65 0	
	59 11 $\frac{1}{2}$	N. 65 55 W.	
	59 21 $\frac{1}{2}$	64 25	21 44 $\frac{1}{2}$
	59 36 $\frac{1}{2}$	65 15	
	59 46 $\frac{1}{2}$	63 50	
		Mean	22 7 $\frac{1}{2}$

Observations for the Dip of the Magnetic Needle.

1775.	Face of the Instru- ment.		Face of the Instru- ment.	
	East.	West.	East.	West.
	° ' "	° ' "	° ' "	° ' "
D July 17.	70 20	71 0	69 35	72 15
	70 45	72 30	70 30	71 30
	71 30	72 15	70 40	72 0
	70 10	72 0	71 0	70 40
Mean	70 41 $\frac{1}{4}$	71 56 $\frac{1}{4}$	70 35	70 40
	Changed the Poles.		70 5	71 0
			70 10	72 0
	72 55	69 30	70 22 $\frac{1}{2}$	71 26 $\frac{3}{4}$
	72 0	69 55	Changed the Poles.	
	70 20	69 30	71 45	70 45
	71 45	69 15	71 0	70 50
	72 05	69 25	71 30	70 30
	72 0	71 10	71 20	70 40
Mean	71 50 $\frac{5}{8}$	69 47 $\frac{1}{2}$	71 23 $\frac{3}{4}$	70 41 $\frac{1}{4}$
	Changed the Poles.			
	The mean of all these means is 71 01 $\frac{1}{8}$ which is the dip of the needle's north end.			

Observations on the Tides.

1775.	Apparent Time.	
	H	
D July 17.	0 7 $\frac{1}{2}$	The water at a mark.
	0 24 $\frac{1}{2}$	The water at a second mark.
	0 39 $\frac{1}{2}$	It came to a third.
	2 49 $\frac{1}{2}$	High water.
	4 52 $\frac{1}{2}$	The water returned to the third mark.
	5 17 $\frac{1}{2}$	It returned to the second.
	5 34 $\frac{1}{2}$	It returned to the first.

By one mark the water appeared to flow four feet and one inch, and by another only three feet and ten inches: The mean of the two is three feet, 11 inches and a half.

ASTRONOMICAL OBSERVATIONS

F O R

Determining the LATITUDE of the Ship, and her LONGITUDE, by Mr.
ARNOLD's two Watches, No. 1 and 2.

Made on Board his MAJESTY's Sloop ADVENTURE, in her late Voyage on Discoveries
towards the South.

By Mr. WILLIAM BAYLEY.

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ASTRONOMICAL OBSERVATIONS, &c. 143

It appears, from Page 4, that both N^o. 1 and 2 were set 12" too slow for mean time at Drake's Island, in Plymouth Sound, on July the 10th, in the evening; but Mr. Arnold having forgot to wind up N^o. 2 when he set it a going, it stopped, and was set a going again by Mr. Bayley on the 12th, on which day, when N^o. 1 shewed o h. 30', it shewed 1 h. 23' 45"; and Mr. Bayley remarks, that this Watch was 53' 45", too fast for mean time at Drake's Island on the 13th at noon.—The several rates of going, mentioned on Page 4, were allowed, until our arrival at the Cape of Good Hope.

1772.	Time by Watch		Altitude of the Sun's L. L.	Longitude West of Drake's Island.		Latitude of the Ship N.	Thermom.		No. of Obs.
	No. 1.	No. 2.		By No. 1.	By No. 2.		C.	D.	
July 15.	20 1 19 ¹ / ₂	20 55 30	33 4 ¹ / ₂	2 25 51	2 21 0	47 43	64	62	3
16.	Noon.		63 35			47 29 ¹ / ₄	65	64	
	6 3 42 ¹ / ₂	6 57 59 ¹ / ₂	17 22 ³ / ₄	2 52 3	2 44 9	47 11	65 ¹ / ₂	62	4
17.	Noon.		64 28			46 26 ¹ / ₈	66	68	
18.	19 21 50	20 16 7 ¹ / ₂	25 6	3 38 54	3 25 9	45 35	62 ¹ / ₂	65	3
	10 32 34		56 36			45 22			2
	11 32 45		63 15 ² / ₅			45 19	66	64	3
19.	Noon.		65 14			43 55 ¹ / ₄	64	67	
20.	Noon.		66 26			43 29 ³ / ₄	65	67	
21.	Noon.		66 40			43 26	62	65	3
	6 23 55	7 18 7 ¹ / ₂	13 32	4 19 37 ¹ / ₂	3 56 25 ¹ / ₂	43 40	61	65	3
	19 18 41 ¹ / ₂	20 12 51 ¹ / ₂	23 15	4 39 13 ¹ / ₂	4 13 25 ¹ / ₂	43 37 ¹ / ₃	66	66	
22.	Noon.		66 20			42 36	63	67	3
	18 44 50 ¹ / ₂	19 38 58 ¹ / ₄	16 18 ¹ / ₂	5 25 52 ¹ / ₂	4 56 0	42 16 ¹ / ₄	65	68	
23.	Noon.		67 29			40 03 ¹ / ₄	66 ¹ / ₂	67	
24.	Noon.		69 29			39 32	66	67	3
	6 30 51 ¹ / ₂	7 25 0 ¹ / ₄	13 16	7 34 30	7 0 24	37 40 ¹ / ₃	67	67	3
25.	Noon.		71 40			35 31 ² / ₇	71	72	
	6 16 59	7 11 10	16 19	8 57 42	8 20 43	35 11 ² / ₃	71	72 ¹ / ₂	3
26.	Noon.		73 34			33 43	71	72	3
	6 3 4	6 57 16 ¹ / ₂	19 27 ¹ / ₃	10 8 33	9 28 42	33 23	70 ¹ / ₂	71	3
27.	Noon.		75 9			32 48	74	74 ¹ / ₂	
	6 16 38	7 10 51 ¹ / ₃	16 57 ² / ₃	10 58 10	10 15 9	32 40	73 ¹ / ₂	74	3
28.	Noon.		75 50						
	20 3 41	20 57 54 ¹ / ₂	20 35 ² / ₃	11 37 45	10 52 54				
29.	Noon.		75 50						
	5 45 40	6 39 53	24 13 ⁵ / ₈	12 22 55 ¹ / ₂	11 36 37 ¹ / ₂				
30.	The Time-keepers were carried on shore at Funchal, on the island of Madeira, and compared with the Clock by which the times of equal altitudes had been noted, (See page 6.) from whence I find, that N ^o . 1 made the difference of Longitude, between Drake's Island, and the above-mentioned place, 12° 29' 16", and N ^o . 2 made it 11° 37' 57", that is 16° 45' 23 ¹ / ₂ ", and 15° 54' 4 ¹ / ₂ " West of Greenwich.								
Aug. 2.	Noon.		75 23			32 0 ⁵ / ₁₂	73	72	
	20 59 35	21 53 21 ¹ / ₄	34 32 ⁵ / ₈	12 52 22 ¹ / ₂	11 52 45 ¹ / ₂	30 0	73	74 ¹ / ₂	4
3.	Noon.		77 24			29 43 ⁷ / ₁₂	75	73	
	6 11 51	7 5 46 ¹ / ₂	18 4 ¹ / ₄	13 5 52	11 55 9	29 25	72 ¹ / ₂	72	5
4.	Noon.		78 11			28 40 ¹ / ₄	74	73	
	4 25 44	5 19 39 ¹ / ₂	41 40 ¹ / ₂	13 58 30	12 47 58	28 29	74 ¹ / ₂	73	2

1772.	Time by Watch.		Altitude of the ☉'s L. L.	Longitude West of Drake's Island		Latitude of the Ship N.	Thermoms.		No. of Obs.
	No. 1.	No. 2.		By No. 1.	By No. 2.		C.	D.	
	H	H		°	°				
♂ Aug. 4.	4 42 54		37 51 $\frac{3}{4}$			28 29	74 $\frac{1}{2}$	73	4
	4 53 13		35 37 $\frac{1}{2}$	13 52 15		28 29	74 $\frac{1}{2}$	73	2
	6 50 28		10 10 $\frac{1}{2}$			28 25	74	73	4
♀ — 5.	Noon.		78 42			27 53 $\frac{9}{10}$	74	73	
	5 22 41 $\frac{1}{2}$		29 18 $\frac{5}{8}$			27 31 $\frac{1}{6}$	74	73	5
	5 52 53 $\frac{1}{2}$		22 38 $\frac{1}{8}$	14 15 45		27 30 $\frac{1}{6}$	74	73	4
♂ — 6.	Noon.		80 12			26 6 $\frac{1}{2}$	74	73	
	20 44 13 $\frac{1}{2}$	21 38 8	28 48 $\frac{1}{2}$	14 44 37 $\frac{1}{2}$	13 36 51	24 32	74	76	4
♀ — 7.	Noon.		81 54			24 8 $\frac{7}{8}$	74 $\frac{1}{2}$	75	
♂ — 8.	Noon.		83 34			22 10 $\frac{1}{4}$	73	76	
	6 2 13		20 19 $\frac{1}{2}$	15 22 18		21 50	73	73	2
	20 19 15	21 13 17 $\frac{1}{2}$	21 23 $\frac{1}{2}$	16 1 30	14 31 0	20 42	74	74	5
☉ — 9.	Noon.		85 18			20 8 $\frac{3}{4}$			
☽ — 10.	Noon.		87 8			18 1	77 $\frac{1}{2}$	77	
	22 28 40	23 22 29	49 25 $\frac{1}{4}$	17 57 30	16 19 20	16 29 $\frac{1}{2}$	77	78 $\frac{1}{2}$	5
♂ — 11.	Noon.		88 40			16 11 $\frac{2}{3}$			
	21 9 54	22 3 43 $\frac{1}{2}$	30 04	18 23 7 $\frac{1}{2}$	16 41 27	15 12	77	78	4
♂ — 15.	5 45 55	6 39 26	24 45	18 14 7 $\frac{1}{2}$	16 17 10	13 23	79	79 $\frac{1}{2}$	4
	20 40 50 $\frac{1}{4}$	21 34 19	22 46 $\frac{1}{8}$	18 17 0	16 17 30	12 36	79 $\frac{1}{2}$	79	4
☉ — 16.	Noon.		88 40			12 21 $\frac{1}{2}$	79	79 $\frac{1}{2}$	
♂ — 18.	Noon.		88 23			11 25 $\frac{1}{2}$	80	81	
	5 56 30	6 50 5	19 39 $\frac{7}{8}$	16 24 54	14 19 0	11 18	80	77	4
	19 53 25		13 19	15 57 30		10 47	79	76	3
♀ — 19.	20 21 32	21 15 19	20 27 $\frac{3}{4}$	15 20 0	13 12 0	9 17	78	77	4
♀ — 21.	Noon.		86 38			8 41 $\frac{1}{3}$	79	78	
♂ — 22.	Noon.		86 11			7 55 $\frac{1}{2}$	79	78 $\frac{1}{2}$	
	20 42 16 $\frac{1}{2}$	21 36 29	28 33 $\frac{3}{4}$	11 56 46 $\frac{1}{2}$	9 45 0	7 4			4
☉ — 23.	Noon.		85 30			6 53 $\frac{1}{2}$	79	79 $\frac{1}{2}$	
☽ — 24.	Noon.		85 22			6 24 $\frac{1}{2}$			
	5 45 33	6 39 56	14 58 $\frac{3}{4}$	10 9 0	7 55 0	6 20	79	78	4
♂ — 25.	Noon.		85 12			5 53 $\frac{1}{4}$	80	79 $\frac{1}{2}$	
♀ — 26.	20 32 46	21 27 26	30 57	6 49 46	4 31 9	4 22	79 $\frac{1}{2}$	80	4
♂ — 27.	Noon.		84 14			4 13 $\frac{3}{4}$	79	80	
	4 26 53	5 21 36	30 7 $\frac{3}{4}$	6 23 27	4 17 50	4 9	77 $\frac{1}{2}$	78	8
♀ — 28.	Noon.		84 02			3 40 $\frac{3}{4}$			
	5 2 37 $\frac{1}{2}$	5 57 29	19 41	4 53 43 $\frac{1}{2}$	2 23 30	3 36	76 $\frac{1}{2}$	78	6
	19 23 32 $\frac{1}{2}$	20 18 29	16 40 $\frac{1}{2}$	4 7 30	1 46 38	3 20	77	77 $\frac{1}{2}$	6
♂ — 29.	Noon.		83 58			3 15 $\frac{4}{5}$			
	5 16 30 $\frac{1}{3}$	6 11 31	14 44 $\frac{7}{8}$	3 29 25	1 8 15	3 10	76	77	6
☉ — 30.	Noon.		83 44		East.	2 40	78 $\frac{1}{2}$	78	
	20 4 8 $\frac{1}{3}$	20 59 26	30 20 $\frac{3}{4}$	0 27 39	1 54 45	2 31	77	78	6
☽ — 31.	Noon.		84 0			2 34 $\frac{1}{2}$	78	78 $\frac{1}{2}$	
	4 30 34	5 25 53	22 31 $\frac{5}{8}$	0 8 16	2 14 51	2 31 $\frac{1}{2}$	77	76 $\frac{1}{2}$	6
	20 15 21	21 10 41	33 20 $\frac{5}{8}$	0 14 30	2 10 4	2 4	77	78	6
♂ Sept. 1.	Noon.		83 47			1 59	78	78 $\frac{1}{2}$	
	3 26 41 $\frac{1}{2}$		38 21 $\frac{1}{4}$			1 55 $\frac{1}{10}$	77 $\frac{1}{2}$	78	
	3 42 52 $\frac{1}{2}$	4 38 14	34 26 $\frac{2}{3}$	0 24 57	2 0 51	1 55			3

ON BOARD THE ADVENTURE.

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1772.		Time by Watch		Altitude of the ☉'s L. L.	Longitude West of Drake's Island		Latitude of the Ship N.	Thermoms.		No. of Obs.
		No. 1.	No. 2.		By No. 1.	By No. 2.		C.	D.	
		H	H		° ' "	° ' "				
8 Sept.	2.	Noon.		83 33			1 23 $\frac{1}{2}$	78	78 $\frac{1}{2}$	
4 —	3.	Noon.		83 32 $\frac{1}{2}$			1 0 $\frac{1}{2}$	77	77 $\frac{1}{2}$	
		19 26 28	20 22 1	18 6 $\frac{5}{12}$	3 29 51	0 58 3	0 53	77	77	6
8 —	4.	Noon.		83 45			0 51	77 $\frac{1}{2}$	77	
		3 0 58 $\frac{2}{3}$		47 44 $\frac{5}{8}$		West.	0 49	76 $\frac{1}{2}$	77	6
		3 30 58 $\frac{3}{4}$	4 26 35	40 23 $\frac{1}{4}$	3 46 21	1 14 9	0 49	76	77	6
h —	5.	Noon.		84 13			0 56 $\frac{1}{3}$	77	77 $\frac{1}{2}$	
		3 22 26		42 39 $\frac{2}{3}$			0 55	77	76 $\frac{1}{2}$	3
		3 43 19	4 39 12 $\frac{1}{2}$	37 22	3 50 46 $\frac{1}{2}$	1 19 45	0 55	77	76 $\frac{1}{2}$	6
		5 41 22		7 59						
				70 10 =	Altitude of ☉'s L. L.		0 51	76	75 $\frac{1}{2}$	
o —	6.	Noon.		84 15	3 6 30	0 27 6	0 40	76	77	6
		4 18 59	5 15 15	27 20 $\frac{1}{2}$	2 45 24	0 16 25	0 35 $\frac{1}{4}$	76 $\frac{1}{2}$	76	
D —	7.	Noon.		84 25			0 31	77	76	6
							0 23 $\frac{3}{4}$	76 $\frac{1}{2}$	76	
							South.			
		20 11 42	21 8 17	29 56 $\frac{1}{8}$	3 0 36	0 30 51	0 11	76	75	6
8 —	8.	Noon.		84 6			0 18	76	75 $\frac{1}{2}$	
		4 8 6 $\frac{1}{3}$	5 4 43 $\frac{1}{2}$	30 35 $\frac{3}{4}$	3 32 33	1 2 16	0 20	76	75	6
		20 6 32	21 3 12 $\frac{1}{2}$	27 56 $\frac{1}{12}$	3 55 6	1 24 15	0 50	76	76	6
8 —	9.	Noon.		83 52			0 54 $\frac{3}{4}$	76	76 $\frac{1}{2}$	
		5 16 42 $\frac{1}{3}$	6 13 25	14 12 $\frac{1}{8}$	4 18 22 $\frac{1}{2}$	1 46 7 $\frac{1}{2}$	1 0	76	75 $\frac{1}{2}$	6
4 —	10.	Noon.		83 12			1 57 $\frac{1}{2}$	76	75 $\frac{1}{2}$	
		5 2 9 $\frac{2}{3}$	5 58 59	19 3 $\frac{1}{2}$	5 34 10 $\frac{1}{2}$	3 0 15	2 7	75	74	6
		19 53 34	20 50 25	22 19	6 21 19 $\frac{1}{2}$	3 45 31	2 49	75	74	3
8 —	11.	Noon.		82 33			2 59 $\frac{3}{4}$	76	76	
		4 43 28	5 39 56	24 39	6 44 45	4 8 30	3 10			6
h —	12.	Noon.		81 45			4 10 $\frac{2}{3}$	76	75 $\frac{3}{4}$	
		4 50 8 $\frac{1}{2}$	5 47 10	23 34 $\frac{1}{8}$	7 36 20	4 58 45	4 20	76	75	6
o —	13.	Pocket Watch.		79 21			5 5			
		4 32 32	5 29 33	28 47 $\frac{3}{4}$	8 37 36	5 56 36	5 15	76	75	3
D —	14.	Noon.		80 12			6 29 $\frac{1}{2}$	75	75 $\frac{1}{2}$	
		5 7 10	6 4 34	21 4 $\frac{1}{8}$	9 38 46	7 0 15	6 41			3
8 —	15.	Noon.		78 55			8 9 $\frac{3}{4}$	75	75	
		21 9 40	22 7 24 $\frac{1}{4}$	36 19	11 0 0	8 19 30	9 26			4
8 —	16.	Pocket Watch.		74 20 $\frac{1}{2}$			9 37			
		5 26 50	6 24 33 $\frac{1}{2}$	17 33 $\frac{3}{4}$	11 20 14	8 40 55	9 52	73	73 $\frac{1}{2}$	3
		21 24 24	22 22 25	39 5 $\frac{7}{8}$	11 45 27	9 7 3	10 47	73 $\frac{1}{2}$	73	4
D —	17.	Noon.		76 51			11 0 $\frac{1}{4}$	75	73 $\frac{1}{2}$	
		21 5 14	22 3 19	33 48	12 21 5	9 40 34	12 12	75	74	3
8 —	18.	Noon.		75 49			12 26 $\frac{1}{2}$	75	74	
		20 28 28	21 26 42	24 3 $\frac{1}{3}$	13 13 53	10 17 3	13 48 $\frac{1}{2}$	73	72 $\frac{1}{2}$	5
h —	19.	Noon.		74 34			14 4 $\frac{2}{3}$	74	73	
		9 52 29		14 54			15 19			
		20 15 58	21 14 15	20 24 $\frac{7}{12}$	13 54 25	11 10 10	15 20			6

1772.	Time by Watch		Altitude of the ☉'s L. L.	Longitude West of Drake's Island		Latitude of the Ship S.	Thermoms.		No. of Obs.
	No. 1.	No. 2.		By No. 1.	By No. 2.		C.	D.	
	H " "	H " "		" " "	" " "				
☉ Sept. 20.	Noon.		73 26			15 35 $\frac{4}{3}$	73 $\frac{1}{2}$	73	
☽ — 21.	21 14 54	22 13 11	33 39 $\frac{7}{8}$	14 40 30	11 50 0	16 56			4
	Noon.		72 16			17 19 $\frac{1}{3}$	73 $\frac{1}{2}$	73	
	20 38 59	21 37 17 $\frac{1}{2}$	24 42 $\frac{5}{8}$	15 5 45	12 15 0	18 24			3
	20 52 42 $\frac{1}{2}$		27 48 $\frac{2}{3}$			18 25 $\frac{1}{2}$			3
	23 19 37		16 7 $\frac{2}{3}$			18 25 $\frac{1}{2}$			3
☽ — 22.	Noon.		71 9			18 39 $\frac{1}{2}$	73	72 $\frac{1}{2}$	
☽ — 23.	21 32 48 $\frac{1}{2}$	22 31 12	36 35 $\frac{1}{2}$	15 35 30	12 42 51	19 54			5
	Noon.		70 03			20 6 $\frac{2}{3}$	73 $\frac{1}{2}$	72	
	21 21 14	22 19 49	33 28 $\frac{5}{8}$	15 57 45	13 4 27	21 19			3
	Pocket Watch.	10 41 52	50 58			21 30			
		12 7 13	65 49						
☽ — 24.	Noon.		69 5			21 28 $\frac{1}{2}$	72	72 $\frac{1}{2}$	
☽ — 25.	Noon.		68 6			22 50 $\frac{1}{3}$	71	71 $\frac{1}{2}$	
	20 32 47 $\frac{1}{2}$	21 30 13 $\frac{1}{2}$	21 17 $\frac{1}{2}$	17 20 7	14 3 9	23 59			4
☽ — 26.	Noon.		67 7			24 12 $\frac{5}{8}$	72	72 $\frac{1}{2}$	
	20 4 21	21 0 24	15 14 $\frac{1}{4}$	17 7 12	13 26 15	24 30			4
☉ — 27.	Noon.		67 3			24 40 $\frac{2}{3}$	72	72 $\frac{1}{2}$	
	20 9 43	21 5 36	16 46 $\frac{1}{12}$	16 56 45	13 10 1	25 18	71	71 $\frac{1}{2}$	3
☽ — 28.	Noon.		66 38			25 28 $\frac{3}{4}$			
	20 16 01	21 12 1	19 6 $\frac{5}{8}$	16 4 16	12 16 0	26 4			4
☽ — 29.	Noon.		66 16 $\frac{1}{2}$			26 13 $\frac{1}{5}$	71	71 $\frac{1}{2}$	
	4 33 10	5 29 13 $\frac{1}{4}$	32 2 $\frac{1}{8}$	15 24 0	11 35 0	26 16			4
☽ — 30.	Noon.		65 55 $\frac{1}{2}$			26 58	71 $\frac{1}{2}$	71	
	5 20 52	6 17 8	19 25 $\frac{1}{4}$	12 57 45	9 9 0	27 5 $\frac{1}{2}$			3
	19 37 35	20 33 44 $\frac{1}{4}$	14 55				70	70 $\frac{1}{2}$	4
☽ Oct. 1.	Noon.		65 52			27 25	71	71 $\frac{1}{2}$	
	4 35 34	5 31 56	27 48 $\frac{3}{8}$	11 8 25	7 17 45	27 27			3
	19 21 22 $\frac{1}{2}$	20 17 15 $\frac{1}{2}$	12 21 $\frac{1}{5}$	10 43 35	6 43 16	27 29	65	67	6
☽ — 2.	Noon.		66 7			27 33 $\frac{3}{4}$	70	69	
	5 33 39	6 29 16	14 9 $\frac{1}{3}$	9 58 54	5 53 30	27 40	66	65	4
			80 26=	D's L. L.		27 42 $\frac{2}{3}$	65	65	
☽ — 3.	Noon.		66 0			28 4	66	66 $\frac{1}{2}$	
	5 24 59 $\frac{1}{2}$	6 20 36	14 37 $\frac{3}{8}$	8 15 10	4 6 15	28 10			4
☉ — 4.	Noon.		65 29			28 58 $\frac{1}{2}$	62 $\frac{1}{2}$	66	
	5 0 44	5 55 47	17 48 $\frac{7}{12}$	5 46 27	1 26 0	29 6			4
☽ — 5.	Noon.		65 50			29 0	66	64	
	4 9 11		27 46 $\frac{1}{3}$	4 17 45		28 51	63	57	4

Here Mr. Bayley remarks, that the Watch (No. 2.) began to go very irregularly, from what cause he could not tell; and on this account he left off computing the Longitude of the ship from it.

1772.		Time by Watch, No. 1.	Altitude of the ☉'s L. L.	Longitude West of Drake's Island.	Latitude of the Ship S.	Baro- meter.	Thermoms		No. of Obs.	Remarks.
		H	° ' "	° ' "	° ' "		C.	D.		
♂	Oct. 6.	Noon.	65 31		29 32 $\frac{1}{2}$		64	61		
		20 0 38	26 46 $\frac{1}{8}$	4 53 48	31 0		63	59	3	
♀	— 7.	Noon.	64 18		31 18 $\frac{1}{2}$		64	59		
		5 28 33	11 22 $\frac{3}{4}$	4 52 51	31 34		64	58	3	
♂	— 8.	Noon.	63 17		32 42		64	59		
		20 20 8	31 57 $\frac{9}{10}$	3 25 34	33 40		64	58	5	
♀	— 9.	Noon.	62 30		33 52 $\frac{1}{2}$		64	59		
♂	— 10.	Noon.	62 17		34 28 $\frac{1}{2}$		64	61		
		4 54 58	15 26 $\frac{1}{2}$	0 53 16	34 34		64	63	6	
○	— 11.	Noon.	62 27		34 41		66	59		
				East.						
		4 33 27	18 58 $\frac{1}{2}$	0 21 49	34 44		64	61	6	
		18 41 53	15 54 $\frac{1}{5}$	0 40 33	34 45		63	58	6	
♂	— 12.	Noon.	62 41		34 49 $\frac{3}{4}$		66	65		
		4 59 16	13 23	0 56 31	34 51		65	64	3	
♂	— 13.	Noon.	62 44		35 9	29,8	64	65		
♀	— 14.	Noon.	62 46		35 29 $\frac{3}{5}$	29,9	65	60		
		18 55 49	23 38 $\frac{1}{5}$	5 49 27	35 33		64	62	5	
♂	— 15.	Noon.	62 46		35 33		64	61		
		4 12 38 $\frac{1}{2}$	18 37 $\frac{1}{2}$	6 44 7	35 32				6	
		18 41 4 $\frac{1}{2}$	23 15 $\frac{1}{2}$	8 42 36	35 18				6	
♀	— 16.	Noon.	63 46		35 14		65	62 $\frac{1}{5}$		
		18 11 47	19 28 $\frac{1}{3}$	11 3 54	35 3		63	57	3	
♂	— 17.	Noon.	64 25		34 57 $\frac{1}{4}$		63	59		
○	— 18.	Noon.	65 11		34 32 $\frac{3}{4}$	29,96	63	59		
		3 41 15	19 0 $\frac{1}{6}$	14 47 0	34 39				3	
♂	— 19.	Noon.	65 43		34 21 $\frac{3}{5}$	29,97	64	59		
		3 53 38	16 9 $\frac{3}{8}$	15 19 0	34 24				4	
		18 26 19	26 52 $\frac{7}{8}$	15 34 0	34 37				4	
♂	— 20.	Noon.	65 41		34 45 $\frac{2}{3}$	29,9	64	59		
		17 7 6	11 5 $\frac{1}{4}$	15 41 0	35 12	29,9	62	54	5	
		Meridian } Altitude. }	43 23 $\frac{1}{2}$	D's U. L.	35 18 $\frac{1}{2}$					
♀	— 21.	Noon.	65 17		35 31 $\frac{2}{3}$	30,2	65	59		
♂	— 22.	Noon.	64 20		36 49	29,8	65	59		
♀	— 23.	Noon.	64 20		37 10	29,9	64	59		
♂	— 24.	Noon.	65 12		36 38 $\frac{3}{4}$	30,1	62	57		
		3 54 33	13 3 $\frac{1}{2}$	20 9 18	36 29	29,9	62	54	6	
○	— 25.	Noon.	66 45		35 26	30,2	60 $\frac{1}{2}$	56 $\frac{1}{2}$		
		3 31 22	16 22 $\frac{1}{4}$	21 56 24	35 19	30,0	61	57	6	
♂	— 26.	Noon.	67 49		34 43	30,0	61	58 $\frac{1}{2}$		
		3 6 11	20 46	23 0 9	34 35	30,0	60	56	4	
♂	— 27.	Noon.	69 6		33 46 $\frac{2}{3}$	30,0	64	61		
		3 31 30	14 46 $\frac{5}{8}$	24 6 4	33 46 $\frac{2}{3}$	30,0	60	56 $\frac{1}{2}$	6	
♀	— 28.	Noon.	69 34		33 38	30,0	64	62 $\frac{1}{2}$		
		3 12 45	18 6 $\frac{3}{8}$	24 57 15	33 44	29,9	62	59 $\frac{1}{2}$	3	

1772.	Time by No. 1.		Altitude of the ☉'s L. L.	Longitude from the Cape.	Latitude of the Ship S.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
	H	"					C.	D.		
24 Oct. 29.	Anchored in Table Bay; and on November 4th, Mr. Bayley compared the watch No. 1. with the clock C, and continued to do so every day until the 14th, from which comparisons he computed that it was then losing at the rate of 20",3 a day on mean solar time; and that when it was compared with the clock on November the 4th, it was 1 h. 49' 9",1 too slow for mean time at the Cape of Good Hope. Consequently, allowing the rate it went at, when at Greenwich, this watch will make the Cape of Good Hope 27° 37' $\frac{5}{8}$ E. of Drake's Island in Plymouth Sound; or, allowing Drake's Island to lie in 4° 16' $\frac{1}{8}$ West, 23° 21' $\frac{1}{2}$ East of Greenwich; that is, 4° 58' $\frac{1}{4}$ more than the Observations of Messrs. Mason and Dixon make it. The watch No. 2. went so imperfectly, for some time before our arrival at this place, that I apprehend it will be quite unnecessary to make any computations of its rate of going at the Cape, or the longitude shewn by it. It stopped entirely before we left the place.									
○ Nov. 22.	We sailed out of Table Bay, and at noon Mr. Bayley computed that the watch was 1 h. 55' 12",6 too slow for mean time at the Cape of Good Hope; on which supposition, and that its rate of going is as above determined, the longitude of the ship will be computed in future.									
24 — 23.	16	42 18	21 23 $\frac{1}{2}$	0 33 48 W.	35 13		67	63	3	
24 — 25.	3	39 56	16 4	1 49 52 W.	37 43		66	62	3	
	17	24 9	28 36 $\frac{1}{4}$	2 34 0 W.	38 40		66	60	4	
24 — 26.	Noon.		71 55		39 0 $\frac{1}{3}$					
24 — 27.	Noon.		71 5		40 1 $\frac{1}{3}$					
	3	30 8 $\frac{1}{2}$	18 35 $\frac{3}{4}$	1 42 43 W.	40 18		66 $\frac{1}{2}$	53	4	
24 — 28.	Noon.		70 22		40 54 $\frac{2}{3}$		64	59		
24 — 29.	Noon.		69 19		42 7 $\frac{2}{3}$		63	52		
24 — 30.	Noon.		69 11		42 45 $\frac{2}{3}$		62	55		
	3	17 8 $\frac{1}{2}$	20 49 $\frac{1}{8}$	0 24 6 W.	42 33		63	52	4	
24 Dec. 3.	3	35 37	17 51 $\frac{1}{2}$		44 46		57	46	4	
24 — 4.	Noon.		66 27		45 43 $\frac{2}{3}$		55 $\frac{1}{2}$	45		
	2	21 42	27 19 $\frac{3}{4}$	0 15 18 E.	45 56		54	42	6	
24 — 5.	Noon.		65 9		47 9 $\frac{1}{8}$		53 $\frac{1}{2}$	46		
24 — 6.	3	45 37	17 28 $\frac{7}{8}$	0 14 34 E.	48 39		50 $\frac{1}{2}$	35	4	
24 — 7.	Noon.		62 43		49 49		49	42		
24 — 9.	Noon.		62 58		49 46		49	34		
	15	28 46	15 38 $\frac{3}{4}$	2 54 4 $\frac{1}{2}$ E.	50 44		48	31 $\frac{1}{2}$	6	
24 — 10.	Noon.		61 46		51 3 $\frac{2}{3}$		49	35		
24 — 11.	Noon.		61 4		51 50					
	3	1 55	23 27 $\frac{7}{8}$	3 20 12 E.	52 5		47	33	4	
24 — 16.	17	21 49	34 25 $\frac{2}{3}$	5 21 34 E.	55 13		44	31	3	
24 — 17.	Noon.		57 52		55 21					
	15	9 55	16 20 $\frac{1}{4}$	6 15 45 E.	55 6		44	30 $\frac{1}{2}$	3	
	Meridian } Altitude. }		37 28	D's U. L.	55 5					
24 — 19.	3	45 1 $\frac{1}{3}$	15 42 $\frac{1}{3}$	7 33 30 E.	54 22		44	31 $\frac{1}{2}$	3	
24 — 21.	Noon.		59 09		54 7		45	34		
	3	1 12	19 44 $\frac{3}{4}$	11 26 48 E.	54 34		45	31 $\frac{1}{2}$	4	
24 — 22.	Noon.		58 24		54 51 $\frac{3}{8}$		45	31 $\frac{1}{2}$		

1772.	Time by No. 1.		Altitude of the ☉'s L. L.	Longitude East of the Cape.	Latitude of the Ship S.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
	H	M					C.	D.		
♂ Dec. 22.	15	34	16	23 49 $\frac{1}{2}$	13 44 15	55 20	45	32	3	
♀ — 23.	Noon.		57 51		55 24		48	31 $\frac{1}{2}$		
♂ — 24.	16	59	18 $\frac{1}{2}$	35 33 $\frac{1}{2}$	13 37 0	56 19	46	32	6	
♀ — 24.	Noon.		56 44		56 29 $\frac{1}{2}$	29,35	50	34		
♂ — 26.	Noon.		54 40		58 29 $\frac{1}{2}$	29,35				Very good;
	3	34	32	17 52 $\frac{1}{2}$	8 29 31 $\frac{1}{2}$	58 33	29,4	46	32	6 Ditto.
	4	22	0	12 8 $\frac{3}{8}$	8 23 21	58 34	29,4	46	32	4 Ditto.
☉ — 27.	Noon.		54 46:		58 20 $\frac{7}{8}$	29,5	47	35		Hazy.
♂ — 29.	Noon.		53 49:		59 11	29,1	49	33		Ditto.
♀ — 30.	Noon.		53 34:		59 21 $\frac{3}{8}$	29,15	50	34		Ditto.
				West.						
	2	21	14	32 4 $\frac{1}{3}$	1 12 51	59 26	29,1	47	32	7 Ditto.
1773.										
♂ Jan. 2.	Noon.		53 23:		59 17 $\frac{1}{2}$					Very hazy.
	3	9	3	29 01 $\frac{3}{4}$	7 23 27	59 01	29,3	47	31 $\frac{1}{2}$	6
	5	4	20	14 28 $\frac{1}{2}$	7 26 15	58 56	29,55	46	31	4
	Meridian } Altitude. }		19 33	D's U. L.	58 49 $\frac{1}{2}$	29,5	46	31		
♂ — 4.	Noon.		53 27		59 01	29,48	46	33		Hazy.
	9	53	0	51 59	Pocket } Watch. }	59 59	Ship's course E. by S. true, five miles an hour.			
♀ — 6.	11	7	5	48 22	East.					
	14	10	51	11 17 $\frac{1}{2}$	9 24 54	60 25	29,1	45	33	3 A little hazy.
	14	36	46	14 15 $\frac{1}{4}$	9 30 30	60 27	29,1	45	33	4 Ditto.
	16	39	28	29 14 $\frac{3}{4}$	9 47 40	60 30	29,1	47	33 $\frac{1}{2}$	3 Ditto.
♂ — 7.	Noon.		51 30 $\frac{1}{2}$		60 36	29,0	50	34		Ditto.
	15	24	46	21 59	13 47 0	61 13	28,95	45	32	4 Very clear.
	7	16	41	46 59	Pocket } Watch. }	61 19 $\frac{3}{4}$	{ Ship's true course E. S. E. $\frac{1}{4}$ E. distance run, 10 $\frac{1}{2}$ miles between the Observations.			
	9	17	30	50 30						
♀ — 8.	14	49	39	19 8 $\frac{1}{10}$	16 41 30	61 33	28,91	45	32 $\frac{1}{2}$	4 Pretty clear.
♂ — 9.	Noon.		50 15		61 35	29,07	47	35		Good.
	6	27	19	43 34	Pocket. }	61 55	Correct course S. S. E. 3 miles an hour.			
	8	7	15	49 21	Wach. }					
☉ — 10.	9	16	5	49 18	Ditto.	61 57	Course, &c. as before.			
	1	32	20 $\frac{1}{2}$	27 3 $\frac{3}{4}$	18 49 30	62 10	29,1	46	33	4 Clear, and Good.
	Meridian } Altitude. }		14 30	D's L. L.	62 44					
	16	25	7	31 10 $\frac{1}{4}$	19 40 57	63 4	29,2	48	32 $\frac{1}{2}$	4
	7	29	18	46 42	Pocket }	63 22				
♂ — 11.	9	21	24	47 31	Watch. }					
	13	39	22	13 31 $\frac{2}{3}$	20 37 30	64 13	29,3	47	33	3
♂ — 12.	Noon.		47 08		64 14	29,35	50	35		Good.
	1	57	42	23 0 $\frac{9}{10}$	20 43 6	64 12	29,32	49	34	5
♀ — 13.	Noon.		46 59		64 13 $\frac{7}{8}$	29,4	49	34		Good.
	16	46	6	33 23	21 30 01 $\frac{1}{2}$	64 02	29,3	46	32 $\frac{1}{2}$	3
♂ — 14.	Noon.		47 01		63 59 $\frac{1}{4}$	29,25	49	35 $\frac{1}{2}$		

1773.	Time by No. 1.	Altitude of the ☉'s L. L.	Longitude East of the Cape.	Latitude of the Ship South.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
						C.	D.		
Jan. 14.	2 48 16	16 48 $\frac{1}{10}$	21 38 28 $\frac{1}{2}$	63 57	29,2	47	33	3	
	15 39 39 $\frac{1}{2}$	26 24 $\frac{1}{4}$	21 52 25 $\frac{1}{2}$	63 37	29,05	49	34	4	Good.
☉ — 15.	Noon.	47 15		63 35	29,05	50	37		Ditto.
☉ — 16.	Noon.	46 7		64 32	29,0	49	35		Ditto.
	2 22 1	19 25 $\frac{9}{10}$	21 35 30	64 58	29,02	48	33	3	
☉ — 17.	Noon.	43 53 :		66 34	28,9	47	32 $\frac{1}{2}$		Hazy.
	1 25 0 $\frac{1}{2}$	25 7 $\frac{1}{4}$	21 23 39	67 2	28,9	46	33	6	Hazy.
☉ — 18.	Noon.	44 16 :		65 58	28,95	46	33		Very hazy.
	1 14 40	26 2 $\frac{1}{2}$:	21 37 46 $\frac{1}{2}$	65 38	28,9	45	32 $\frac{1}{2}$	6	Bad horizon.
	15 54 59	27 15 $\frac{2}{3}$:	22 7 9	64 45	28,95	46	33	3	Ditto, and high sea.
☉ — 19.	Noon.	45 32		64 29 $\frac{3}{4}$	28,85	47	34		Good.
☉ — 20.	0 57 8 $\frac{2}{3}$	27 25 $\frac{2}{3}$	22 37 10 $\frac{1}{2}$	63 45	28,7	45	32 $\frac{1}{2}$	3	A little hazy.
	16 28 45	31 30 $\frac{3}{4}$	23 29 30	62 57	29,0	46	33 $\frac{1}{2}$	3	
☉ — 21.	1 46 24	21 10 $\frac{3}{4}$	23 54 4 $\frac{1}{2}$	62 28	28,75	47	34 $\frac{1}{2}$	3	
☉ — 22.	Noon.	47 48		61 33 $\frac{1}{4}$	29,25	49	34		Good.
	14 16 38	18 4 $\frac{1}{2}$	25 58 3	60 25	29,25	47 $\frac{1}{2}$	34	6	Flying clouds.
☉ — 23.	Noon.	49 06		60 02 $\frac{1}{8}$	29,1	47	35		Good.
☉ — 24.	Noon.	50 29 :		58 23 $\frac{3}{4}$	29,13	46	35		Hazy.
	0 17 30 $\frac{1}{3}$	28 25 $\frac{3}{4}$:	32 15 9	58 5	29,2	48	33	3	Bad horizon, and a
	2 39 7	9 14 $\frac{3}{4}$:	32 23 31	58 1	29,2	48	33	4	high sea.
☉ — 26.	15 55 0	33 15 $\frac{3}{4}$	33 45 15	56 44	28,75	45 $\frac{1}{2}$	33 $\frac{1}{2}$	4	
☉ — 27.	Noon.	51 38		56 29 $\frac{3}{4}$	29,0	47	35		
	0 47 38	22 6 $\frac{9}{10}$	34 3 21	56 12	29,1	47	33	3	Very good:
	15 24 19	21 16	34 33 27	55 3	29,5	48	36	6	Ditto.
☉ — 28.	Noon.	53 20		54 31 $\frac{4}{5}$	29,5	48	36		
☉ — 29.	Noon.	55 8 :		52 27 $\frac{2}{3}$	29,55	48	37		Hazy, and a great sea.
☉ — 30.	15 10 11	31 11 $\frac{3}{4}$	40 7 54	51 10	29,55	44	38	6	Very good.
☉ — 31.	8 0 53	55 2	Pocket		Ship's true course north, at the rate of 5 $\frac{1}{2}$ miles an hour.				
	9 5 8	49 46	Watch.	50 48					
☉ — Feb. 2.	14 58 34	29 49 $\frac{7}{8}$	40 35 22	49 10	30,0	49	41	5	Very good.
	7 53 27	56 24	Pocket		The altitudes put down are correct altitudes of the ☉'s center.				
	9 20 21	47 27	Watch.	48 32					
	0 39 41 $\frac{1}{2}$	15 43 $\frac{1}{2}$	43 7 34	48 1	30,15	54	44	5	Very good.
	13 26 1	16 42 $\frac{1}{2}$	44 8 4	48 42	30,1	51	43	6	Ditto.
	5 35 55	53 39	Pocket		The altitudes are of the ☉'s center, corrected.				
	6 44 29	57 32	Watch.	48 45					
☉ — 3.	14 59 36	30 59 $\frac{1}{2}$	42 56 33	49 4	29,8	50	43	4	
☉ — 4.	Noon.	56 38		49 15					
	0 57 40 $\frac{1}{3}$	13 5	42 23 48	49 37	29,7	49	43	3	
	14 45 46	28 6 $\frac{1}{8}$	42 12 52 $\frac{1}{2}$	49 12	29,55	51	40	6	
☉ — 5.	Noon.	56 30		49 3 $\frac{9}{10}$	29,5	52	41 $\frac{1}{2}$		Good.
	0 20 34	18 54 $\frac{5}{8}$	42 2 1 $\frac{1}{2}$	48 34	29,6	49	40 $\frac{1}{2}$	6	
☉ — 6.	13 40 19	18 46 $\frac{1}{2}$	44 49 13 $\frac{1}{2}$	48 38	29,45	50	43	6	Clear and good horizon.
☉ — 7.	Noon.	56 5		48 52 $\frac{2}{3}$	29,8	52	44		Very good.
	0 19 36	16 2 $\frac{3}{4}$:	45 58 27	49 4	29,85	48	42	6	Hazy.
☉ — 9.	Noon.	54 2		50 17 $\frac{2}{3}$					Good.

ON BOARD THE ADVENTURE.

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1773.	Time by No. 1.	Altitude of the Sun's L. L.	Longitude East of the Cape.	Latitude of the Ship South.	Barometer.	Thermoms.		No. of Obs.	Remarks.
						C.	D.		
♂ Feb. 9.	13 33 16	19 39 $\frac{5}{8}$	48 47 9	50 13	29,6	49	39	6	
♀ — 10.	Noon.	54 7		49 52 $\frac{5}{8}$	29,4	51	40		Good.
♂ — 11.	12 48 29	12 39 $\frac{1}{2}$	49 18 10	50 00	29,15	51	40	4	
♀ — 12.	Noon.	53 22		50 18 $\frac{3}{4}$	28,9	52	42		Good.
♂ — 13.	12 53 49	16 00 $\frac{1}{4}$	53 48 10 $\frac{1}{2}$	51 00	29,6	47	37	6	
☉ — 14.	Noon.	51 01		51 39 $\frac{1}{2}$	29,5	51	39 $\frac{1}{2}$		Good.
	21 23 22	33 2 $\frac{3}{4}$	58 41 51	51 47	29,6	50	38	6	
	13 9 31	22 22 $\frac{3}{4}$	60 57 21	52 10	29,65	47	37	6	
♂ — 15.	Noon.	50 7		52 13	29,7	50	39		Good.
	14 27 45	34 53 $\frac{1}{2}$	63 39 00	52 27	29,65	44	36	4	
♀ — 17.	13 33 9	30 35 $\frac{1}{10}$	70 39 6	52 54	28,95	46	37	6	
♂ — 18.	Noon.	48 26		52 51 $\frac{3}{4}$	29,05	46	40		Good.
	2 33 44	40 12	Pocket Watch. }	52 35	{ Ship's course at right angles to the Sun's bearing at the first Observation.				
	4 11 16	47 41							
♀ — 19.	11 18 29	15 11 $\frac{3}{8}$	78 37 27	52 20	29,1	42	36	6	
♂ — 20.	Noon.	48 19		52 16	29,05	49	36 $\frac{1}{2}$		
	10 44 42	12 4 $\frac{1}{2}$	82 16 48	52 18	29,5	51	40	6	
☉ — 21.	Noon.	48 00		52 14	29,6	53 $\frac{1}{2}$	41		
	21 42 52 $\frac{1}{2}$	13 02 $\frac{1}{2}$	83 3 3	52 9	29,55	48	38	3	
♂ — 22.	13 11 7	34 56 $\frac{5}{8}$	86 10 30	52 20	28,35	49	39	4	
♀ — 23.	Noon.	47 13		52 17 $\frac{1}{2}$	28,5	51	41 $\frac{1}{2}$		Good.
	22 10 35 $\frac{1}{2}$	5 10:	87 57 42	52 16	28,45	51	41 $\frac{1}{2}$	4	Bad horizon.
	11 56 6	26 8 $\frac{3}{5}$	88 57 42	52 9	28,3	53	40	6	
♂ — 24.	Noon.	47 1		52 7 $\frac{1}{2}$	28,5	54	43		Good.
	11 46 24 $\frac{1}{2}$	26 34 $\frac{5}{8}$	92 22 28 $\frac{1}{2}$	51 47	29,35	52	41	6	
♂ — 25.	Noon.	47 5		51 41 $\frac{1}{2}$	29,45	53	45		Good.
	20 19 32	17 38 $\frac{5}{8}$	94 6 48	51 35	29,65	49	40	5	
	10 28 55	17 9 $\frac{2}{3}$	96 9 39	51 21	29,95	53	43	6	
♂ — 27.	9 26 44	12 3	104 3 30	50 29	29,2	55	43	6	
☉ — 28.	Noon.	47 15		50 24	29,45	54	43 $\frac{1}{2}$		Good.
	19 31 31	16 50 $\frac{3}{4}$	105 56 49	50 15	29,3	53	54	4	
	9 52 48	18 20	107 25 21	49 24	29,55	54	47	6	
♂ March 3.	19 29 37	10 52 $\frac{1}{2}$	114 19 34	45 56	29,5	55	52	5	
	8 40 53 $\frac{2}{3}$	11 27 $\frac{1}{2}$	115 24 15	45 14	29,7	57	49	6	
♂ — 4.	Noon.	51 20		44 48					
	18 17 34	21 45	116 25 30	44 32	29,65	54	51	4	
	Regulus.	32 40	Meridian Altitude. }	44 21					
	9 45 16	24 41 $\frac{3}{4}$							
♀ — 5.	Noon.	51 42	118 18 48	44 08	29,85	59	52	6	
	9 4 36	19 54 $\frac{1}{8}$	121 44 30	44 3 $\frac{3}{5}$	29,75	59	56		Good.
♂ — 6.	Noon.	51 24		43 55	29,8	58	53	4	
	18 15 43	16 37 $\frac{1}{2}$	123 29 21	43 54	29,6	58	52		
	8 33 55 $\frac{2}{3}$	16 3	124 13 3	43 46	29,45	58	51 $\frac{1}{2}$	4	
☉ — 7.	Noon.	51 13		43 46 $\frac{1}{2}$	29,7	56	51	6	
	18 17 14	14 39 $\frac{1}{2}$	125 12 24	43 47	29,75	59	52 $\frac{1}{2}$		
					29,9	59	54 $\frac{1}{2}$	6	

1773.	Time by No. 1.	Altitude of the ☉'s L. L.	Longitude East of the Cape.	Latitude of the Ship South.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
						C.	D.		
☉ March 7.	9 15 27	24 49 $\frac{1}{2}$	126 33 37	43 45	29,9	59	54 $\frac{1}{2}$	6	Good. A little hazy.
☽ — 8.	Noon.	50 55		43 40 $\frac{5}{8}$	29,9	59	55		
♂ — 9.	Noon.	50 27 $\frac{1}{4}$		43 45 $\frac{2}{3}$	30,0	59	57		
	17 26 33	20 11	129 1 31	43 42	30,1	57	54	6	{ The S. Point of Van Die- man's Land, N. 5 miles.
	9 11 21	26 15 $\frac{3}{8}$	130 22 49	43 22	30,15	64	56	6	
☾ — 11.	Noon.	50 1	Dip 2 0	43 22 $\frac{7}{8}$	29,95	62	57		{ In the Entrance of Adventure Bay.
♀ — 12.	Noon.	49 35	Dip 2 0	43 24 $\frac{1}{2}$	30,0	65	58		{ In the bottom of Ad- venture Bay.
☽ — 15.	Noon.	48 31		43 20 $\frac{1}{3}$					{ At the entrance of Adventure Bay.
	17 42 13 $\frac{1}{2}$	14 01 $\frac{2}{3}$	130 38 43 $\frac{1}{2}$	43 23	29,5	61	51	6	{ Off the entrance of Adventure Bay.
	7 34 51	9 15	131 23 53	43 34	29,7	65	52	6	{ Off Van Dieman's L.
♂ — 16.	Noon.	48 19 $\frac{1}{2}$		43 8 $\frac{1}{4}$	29,65	64	53		{ About four or five leagues off shore.
	8 26 43	18 46 $\frac{1}{3}$	131 32 30	42 10	29,7	64	53	4	{ Van Dieman's Land from S. W. to N. W. $\frac{1}{2}$ W.
♂ — 17.	Noon.	49 20		41 44 $\frac{1}{3}$	29,8	64	54 $\frac{1}{2}$		{ St. Patrick's Head, W. N. W. 4 leagues.
	7 37 34	10 5 $\frac{1}{2}$	131 57 8	40 47	29,85	62	53	6	{ The land bore from W. S. W. $\frac{1}{4}$ S. to N. W. by N.
☾ — 18.	Noon.	50 19		40 21 $\frac{3}{4}$	29,95	65	54 $\frac{1}{2}$		{ The land bore from S. to N. W. by N. 7 leagues.
	8 5 52	15 17 $\frac{9}{10}$	131 33 55	39 24	30,15	63	57	6	{ Saw the land bearing W. S. W. $\frac{1}{2}$ W. distance 11 leagues.
♀ — 19.	Noon.	50 56		39 21	30,05	64	59		A little hazy.
	7 39 19	11 23	133 21 6	39 20	30,15	65	60	4	
♂ — 20.	Noon.	50 31		39 22 $\frac{1}{3}$	30,1	66	61		
	17 19 43	14 37 $\frac{1}{3}$	133 57 41	39 20	30,15	63	56	6	
☉ — 21.	Noon.	50 19		39 16 $\frac{2}{3}$	30,15	65	59 $\frac{1}{2}$		
	6 58 25	5 24 $\frac{2}{3}$	136 7 30	39 32	30,1	64	57	6	
♂ — 23.	8 30 59 $\frac{1}{2}$	24 26 $\frac{1}{2}$	138 32 45	38 55	30,1				{ The Sun bore N. E. $\frac{1}{2}$ E. at the first Observation; and the ship's course was S. by E. 3 miles an hour.
	9 38 11	35 39		38 58					
	11 25 40	47 46							
♂ — 24.	Noon.	49 21 $\frac{3}{4}$		38 57 $\frac{1}{2}$	30,05	61	58		
	7 34 31	15 10 $\frac{1}{3}$	140 25 10	39 17	30,05	61	58	3	
☾ — 25.	Noon.	48 34		39 20 $\frac{3}{4}$	30,1	62	60		
	17 0 39	10 57	141 4 45	39 26	30,3	63	60	6	
	7 22 0	13 58 $\frac{1}{2}$	142 14 41	39 58	30,25	65	61	6	
♀ — 26.	Noon.	47 26		40 6 $\frac{2}{3}$	30,25	63	61 $\frac{1}{2}$		
	16 49 51	10 51	143 11 31	40 12	30,35	62	59	6	
	7 8 19	12 32 $\frac{3}{8}$	144 0 6	40 13	30,45	66	61 $\frac{1}{2}$	6	
♂ — 27.	Noon.	46 54 $\frac{1}{2}$		40 14 $\frac{1}{2}$	30,5	65	61		

If we compute all the way from England, at the rate it was going at Greenwich, it will make this place $199^{\circ} 59' 39''$ East of Drake's Island, in Plymouth Sound, or $195^{\circ} 43' 31\frac{1}{2}''$ East of Greenwich.

June 7th we left Queen Charlotte's Sound; on which day, at noon, Mr. Bayley calculates that the Watch was $13\text{ h. } 36' 58''$, too slow for mean time at that place; on which supposition, and that its rate of going was losing $25''.66$ a day on mean time, (See p. 48.) he computed the following longitudes of the ship. He moreover supposes, that the true Longitude of Queen Charlotte's Sound is $173^{\circ} 56' 30''$ East, which is what his Observations, made there this time, gave it.

1773.	Time by No. 1.	Altitude of the Sun's L. L.	Longitude East of Greenwich.	Latitude of the Ship South.	Barometer.	Thermoms.		No. of Obs.	Remarks.
						C.	D.		
June 7.	6 29 16	6 26 $\frac{1}{2}$	174 23 3	41 40 $\frac{1}{2}$	30,1	59	49 $\frac{1}{2}$	6	
8 — 9.	6 11 48	5 4 $\frac{1}{2}$	179 0 4 $\frac{1}{2}$	43 49 $\frac{1}{2}$	29,6	59	53	6	
h — 12.	7 15 18 $\frac{1}{2}$	13 14 $\frac{3}{8}$	184 31 24	46 17	29,95	60	50	6	
D — 14.	Noon.	19 50:		46 43 $\frac{1}{2}$	29,6	64	48 $\frac{1}{2}$		A little hazy.
8 — 15.	Noon.	19 45		46 45 $\frac{1}{2}$	29,75	64	49		Good.
u — 17.	Noon.	20 6	185 22 55	46 51	29,8	60	48	6	Good.
8 — 18.	Noon.	20 35		45 49 $\frac{7}{8}$	29,95	59 $\frac{1}{2}$	49		Good.
	5 57 5	7 41 $\frac{1}{8}$	189 40 50	45 15	30,1	58 $\frac{1}{2}$	47 $\frac{1}{2}$	6	
	7 19 2	16 12		45 12 $\frac{1}{4}$					☉ N. N. E. at first Observation. Ship's course E. N. E. at the rate of $3\frac{1}{2}$ miles an hour.
	10 5 27	20 17							
h — 19.	8 38 32	21 34		44 30					☉ N. $\frac{1}{2}$ E. at first Observation. Ship's course N. E. by E. $\frac{1}{2}$ E. at the rate of three miles an hour.
☉ — 20.	9 38 0	21 24							
D — 21.	5 54 1	10 44 $\frac{1}{4}$	195 34 40	44 30	30,4	59	51	5	
8 — 22.	Noon.	21 50		44 32 $\frac{1}{2}$	30,15	59 $\frac{1}{2}$	52		
8 — 23.	Noon.	21 47		44 35 $\frac{9}{10}$	30,0	62	50		
8 — 25.	5 42 11 $\frac{1}{3}$	11 3 $\frac{2}{3}$	196 33 45	42 58	29,45	62	52	6	
h — 26.	Noon.	23 22		43 5 $\frac{1}{2}$	29,3	67	55		
☉ — 27.	Noon.	24 5:		42 23 $\frac{1}{2}$	29,35	63	53		Bad horizon.
	8 36 44	11 29 $\frac{2}{3}$	197 40 12	42 24	29,4	62	52	5	
D — 28.	Noon.	24 8:		42 24	29,35	64	53		Hazy.
	4 37 54	3 49 $\frac{7}{10}$	198 24 52	42 40	29,45	62	53	6	
8 — 29.	Noon.	23 49		42 45 $\frac{2}{3}$	29,35	67	53		
	11 41 56	11 28 $\frac{9}{10}$	198 24 54	42 52	29,55	70	52	6	
	5 30 1	11 11 $\frac{1}{5}$	199 13 12	42 56	29,55	63	51	6	
8 — 30.	Noon.	23 39		42 59 $\frac{1}{2}$	29,45	63	51		
	5 47 17 $\frac{1}{3}$	14 5 $\frac{9}{10}$	201 11 21	43 7	29,7	62	49	6	
u July 1.	Noon.	23 36		43 5 $\frac{3}{4}$	29,65	63	50		
	4 38 39	6 26 $\frac{1}{12}$	202 44 40	43 0	29,8	62	49	6	
8 — 2.	Noon.	23 47		42 59	29,75	64	51		
	11 50 32	7 59 $\frac{11}{12}$	202 59 41	43 0	29,85	66	50	6	

1773.		Time by No. 1.	Altitude of the ☉'s L. L.	Longitude East of Greenwich.	Latitude of the Ship South.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
							C.	D.		
♀ July	2.	4 36 44	6 52 $\frac{1}{2}$	204 1 39	43 9	29,65	60	47 $\frac{1}{2}$	6	
h —	3.	Noon.	23 37		43 13 $\frac{1}{4}$	29,8	67	53 $\frac{1}{2}$		
☉ —	4.	11 38 31 $\frac{1}{2}$	8 32 $\frac{1}{2}$	204 39 30	43 17	29,65	64	51	6	
☉ —	4.	Noon.	22 58		43 57 $\frac{1}{4}$	29,9	59	50 $\frac{1}{2}$		
☉ —	4.	11 24 32	9 39 $\frac{3}{8}$	205 23 34	43 47	29,9	61	48 $\frac{1}{2}$	6	
☉ —	5.	4 32 37	9 20 $\frac{1}{2}$	207 59 8	42 17	29,75	59	52	6	
♂ —	6.	Noon.	25 1		42 5 $\frac{1}{2}$	29,75	61 $\frac{1}{2}$	52 $\frac{1}{2}$		
☉ —	6.	11 30 31 $\frac{1}{2}$	8 43 $\frac{1}{2}$	208 16 25	41 52	29,85	59	49	6	
☉ —	6.	4 5 24 $\frac{1}{2}$	6 43 $\frac{1}{2}$	208 50 6	41 21	29,6	59 $\frac{1}{2}$	52	6	
♂ —	7.	Noon.	25 55		41 17 $\frac{1}{2}$					
☉ —	7.	4 7 34 $\frac{3}{4}$	7 43 $\frac{3}{8}$	210 22 54	41 51	29,55	59	52	6	
☉ —	8.	6 40 30	23 33	Pocket Watch.	41 57	☉ north at the first Observation. Ship's course E. S. E. at the rate of six miles an hour.				
☉ —	8.	8 34 15	24 27							
☉ —	8.	4 17 50	10 3 $\frac{2}{3}$	212 43 48	42 33	29,75	59 $\frac{1}{2}$	52 $\frac{1}{2}$	5	
♀ —	9.	Noon.	24 48		42 38 $\frac{1}{8}$	29,9	60	51 $\frac{1}{2}$		
☉ —	9.	11 16 15	7 35 $\frac{1}{2}$	213 12 15	42 43	29,85	60	51 $\frac{1}{2}$	6	
☉ —	9.	4 6 3 $\frac{2}{3}$	9 25 $\frac{2}{3}$	215 21 13	43 28	29,8	58	55	6	
☉ —	9.	4 34 49	13 7	Pocket Watch.	43 38 $\frac{1}{2}$	☉ N. N. E. $\frac{1}{2}$ E. at the first Observat. Ship's course E. S. E. $\frac{1}{2}$ E. Dist. run 20 miles.				
☉ —	10.	8 13 16	23 1							
☉ —	10.	4 2 3 $\frac{1}{2}$	10 13 $\frac{1}{2}$	217 43 30	43 32	30,0	57	46	5	
☉ —	11.	Noon.	24 11		43 30 $\frac{1}{2}$	30,15	61	47		
☉ —	11.	3 40 46	8 43 $\frac{1}{2}$	219 34 33	43 16	30,25	59	47	6	
☉ —	12.	Noon.	24 36		43 13 $\frac{1}{2}$	30,3	59 $\frac{1}{2}$	51 $\frac{1}{2}$		
☉ —	12.	3 15 56	6 16	220 44 37	43 0	30,25	60	55	6	
♂ —	13.	Noon.	25 0		42 57 $\frac{1}{2}$					
☉ —	15.	4 3 53	15 39 $\frac{1}{2}$	223 39 55	41 34	29,35	55 $\frac{1}{2}$	47	6	A high sea.
♀ —	16.	Noon.	27 2		41 23	29,4	62	50 $\frac{1}{2}$		
☉ —	16.	3 33 20 $\frac{1}{2}$	14 31 $\frac{1}{2}$	226 4 18	39 58	29,6	50 $\frac{1}{2}$	45	6	A rough sea.
☉ —	17.	Noon.	28 52		39 42 $\frac{3}{4}$	29,8	52	44		
☉ —	17.	2 48 54 $\frac{1}{2}$	9 31 $\frac{1}{2}$	226 35 56	38 4	30,2	51	45	6	
☉ —	18.	Noon.	30 53		37 51 $\frac{2}{3}$	30,25	61	50 $\frac{1}{2}$		
☉ —	18.	10 51 59	6 40 $\frac{1}{4}$	226 37 45	37 41	30,35	56	47 $\frac{1}{2}$	6	
☉ —	19.	Noon.	32 25		36 30 $\frac{1}{4}$	30,2	61	54 $\frac{1}{2}$		
☉ —	19.	10 49 41	7 40	226 55 10	36 20	30,1	57	55	6	
☉ —	19.	2 34 17	9 7 $\frac{7}{8}$	226 48 45	35 36	30,25	58 $\frac{1}{2}$	54 $\frac{1}{2}$	6	
♂ —	20.	Noon.	33 47		35 19 $\frac{1}{2}$	30,15	62	55		Flying clouds.
☉ —	22.	Noon.	38 26		31 3 $\frac{1}{4}$	29,75	65	64		
☉ —	22.	11 20 48	6 11 $\frac{1}{3}$	225 24 36	30 46	29,7	67	64	3	
☉ —	22.	2 23 47	9 48 $\frac{3}{4}$	225 11 30	29 33	29,85	66	62 $\frac{1}{2}$	6	
♀ —	23.	Noon.	40 20		29 21 $\frac{1}{2}$	29,9	66	64		Very hazy.
☉ —	25.	7 39 19	38 47	Pocket Watch.	29 46	☉ N. W. $\frac{1}{2}$ W. at second Observ. Ship's course N. E. distance run 9 miles.				
☉ —	25.	9 32 36	26 19							
☉ —	25.	2 6 50 $\frac{1}{3}$	7 2 $\frac{1}{2}$	224 40 8	29 3	29,85	70	66	6	
☉ —	26.	Noon.	41 26		28 53 $\frac{1}{8}$	30,0	70	68		
☉ —	26.	11 24 54	6 54 $\frac{1}{4}$	224 58 31	28 34	29,95	70	67	6	

1773.	Time by No. 1	Altitude of the ☉'s L. L.	Longitude East of Greenwich.	Latitude of the Ship South.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
						C.	D.		
July 26.	2 11 21 $\frac{1}{2}$	9 1 $\frac{1}{3}$	225 13 15	28 0	29,95	71	68	6	
☉ — 27.	Noon.	42 37		27 55 $\frac{1}{2}$	30,0	71	69		
	11 16 54	8 36 $\frac{3}{4}$	225 13 42	27 51	29,9	69	67	6	
☉ — 28.	Noon.	43 4		27 42 $\frac{1}{4}$	30,1	70	69		
☉ — 29.	Noon.	43 31		27 29 $\frac{1}{2}$	30,0	72	70		
	10 58 47	13 14 $\frac{3}{4}$	224 12 53	27 20	29,95	70	68	4	
☉ — 30.	Noon.	44 10		27 3 $\frac{1}{2}$	30,0	72 $\frac{1}{2}$	71		
	11 11 56	9 59 $\frac{1}{4}$	225 13 15	26 57	30,0	73 $\frac{1}{2}$	69	6	
☉ — 31.	Noon.	45 9		26 19 $\frac{3}{4}$	29,75	70 $\frac{1}{2}$	67		
	11 13 4	9 50 $\frac{1}{3}$	225 46 0	26 10	29,8	71	67 $\frac{1}{2}$	6	
☉ Aug. 1.	1 56 16	10 33 $\frac{1}{4}$	226 48 9	23 28	30,1	69	67	6	
☉ — 2.	Noon.	48 45		23 14 $\frac{1}{8}$	30,05	70 $\frac{1}{2}$	70		
	11 32 2	6 29 $\frac{1}{2}$	226 42 42	23 5	30,0	69	68 $\frac{1}{2}$	6	
	1 34 12	6 46 $\frac{7}{8}$	227 2 31	22 26	29,9	71	71	6	
☉ — 3.	Noon.	50 4		22 10 $\frac{4}{5}$	30,15	72	72		
	2 10 25	15 10 $\frac{1}{8}$	227 17 19	21 34	30,1	72 $\frac{1}{2}$	71 $\frac{1}{2}$	6	
☉ — 4.	Noon.	51 8		21 22 $\frac{1}{4}$	30,05	74	75		
	1 31 31	8 22 $\frac{1}{2}$	228 21 48	20 48	30,0	74	76	6	
☉ — 5.	Noon.	52 7		20 39 $\frac{1}{4}$	30,15	77	77		
	1 24 2	8 10 $\frac{1}{3}$	229 21 0	19 54	30,05	77	76	6	
☉ — 7.	Noon.	54 28		18 51 $\frac{7}{8}$	30,1	74	71		
	3 2 32	27 29 $\frac{3}{10}$	226 3 34	18 14	30,1	74	76	6	
☉ — 8.	Noon.	52 32		18 4 $\frac{1}{4}$	30,05	75	76		
	2 38 28 $\frac{1}{2}$	21 3 $\frac{3}{4}$	223 51 22	17 45	30,1	75	75	6	
☉ — 9.	Noon.	56 12:		17 41 $\frac{3}{8}$	30,25	75 $\frac{1}{2}$	75		Hazy.
	2 42 50	20 37 $\frac{3}{10}$	221 47 0	17 25	30,25	76 $\frac{1}{2}$	75	6	
☉ — 10.	Noon.	56 47		17 23 $\frac{3}{5}$	30,25	77 $\frac{1}{2}$	78 $\frac{1}{2}$		
	2 31 27	16 46	219 52 0	17 17	30,05	77	77	6	
☉ — 11.	Noon.	57 12		17 16 $\frac{2}{5}$	30,1	77	79		
	2 48 9	19 22	218 17 8	17 12	30,0	77	77	6	
☉ — 12.	Noon.	57 37		17 10	30,0	77 $\frac{1}{2}$	79 $\frac{1}{2}$		
	2 0 30 $\frac{2}{3}$	7 54 $\frac{1}{4}$	217 4 10	17 14	30,1	77	78 $\frac{1}{2}$	3	
☉ — 13.	Noon.	57 49		17 14 $\frac{3}{4}$	30,1	78	80		
	2 15 29	10 6 $\frac{1}{2}$	215 31 43	17 17	30,2	79	79	6	
☉ — 14.	Noon.	58 6		17 17 $\frac{2}{3}$	30,0	78 $\frac{1}{2}$	79 $\frac{1}{2}$		
	12 16 9	9 11 $\frac{3}{5}$	214 44 46	17 20	30,15	78	77 $\frac{1}{2}$	4	
	2 11 50 $\frac{2}{3}$	7 50 $\frac{3}{5}$	213 46 50	17 41	30,1	78	78 $\frac{1}{2}$	6	
☉ — 15.	Noon.	57 56		17 46 $\frac{1}{2}$	30,05	78 $\frac{1}{2}$	80		
	2 32 37 $\frac{2}{3}$	11 46 $\frac{3}{4}$	212 43 15	17 48				6	
☉ — 16.	Noon.	58 15		17 46					
☉ — 17.	Noon.	58 41		17 39 $\frac{3}{5}$					
☉ — 19.	Noon.	59 14		17 44 $\frac{7}{8}$					
☉ — 20.	Noon.	59 33 $\frac{1}{2}$		17 44 $\frac{2}{3}$					
	11 25 43	21 41	213 5 12	17 44 $\frac{3}{4}$				6	Made in Oaiti-peha Bay, on the N. W. side of the lesser peninsula of Ota heite.
☉ — 21.	Noon.	59 53 $\frac{1}{2}$		17 45				6	
	11 47 10	16 50 $\frac{1}{4}$	213 9 46	17 44 $\frac{3}{4}$					

1773.	Time by No. 1.	Altitude of the ☉'s L. L.	Longitude East of Greenwich.	Latitude of the Ship South.	Baro- meter.	Thermoms.		No of Obs.	Remarks.
						C.	D.		
Aug. 25.	Noon.	61 36		17 24 $\frac{1}{3}$					
12	4 55	12 47 $\frac{7}{8}$	213 8 6	17 27				6	Point Venus W. 3 or 4 miles.
26.	The Watch was carried on shore at Point Venus, and on the 27th compared with the Astronomical Clock, by which the times of equal altitudes had been noted: (See page 52) from whence I have computed that the Watch was too slow for mean time, at Point Venus, on August the 27th, at noon, by 16 h. 48' 44", 7, and of course it will place Point Venus 39° 17' 35" to the Eastward of Queen Charlotte's Sound, in New Zealand. By allowing its Greenwich rate, I find that it makes Point Venus 253° 30' 36" East of Drake's Island, in Plymouth Sound; that is, 249° 14' 28" East of Greenwich. Mr. Bayley's computations make the Watch to be losing here at the rate of 46$\frac{1}{3}$" a day, and too slow for mean time, on August the 31st, at noon, by 16 h. 51' 51"; on which suppositions, and that the true Longitude of Point Venus is 210°. 27' 30" East of Greenwich, he has computed the following Longitudes of the Ship.								
Sept. 3.	Noon.	65 28 $\frac{1}{8}$		16 45 $\frac{1}{8}$	30,0	77	77		
12	11 12	11 52 $\frac{1}{2}$	208 50 50		30,1	76	76	6	In Owharre Harbour, on the West side of the Island Huaheine.
4.	Noon.	65 50 $\frac{1}{2}$		16 44 $\frac{5}{8}$	30,1	78 $\frac{1}{2}$	78 $\frac{1}{2}$		
12	1 21	14 2 $\frac{3}{4}$	208 51 42		30,0	76	77	6	
5.	12 8 44	12 10 $\frac{3}{8}$	208 51 16		30,0	77 $\frac{1}{2}$	79	4	
6.	12 28 11	7 27 $\frac{1}{3}$	208 51 14		30,0	78	77	6	
7.	Noon.	66 43		16 59 $\frac{3}{4}$					Off the S. end of Uliatea.
12	13 13	11 17 $\frac{3}{4}$	208 8 39	16 58	30,1	77 $\frac{1}{2}$	77	6	
9.	11 51 43	16 3 $\frac{1}{4}$	208 22 9	16 45 $\frac{1}{3}$	30,1	79	78	6	In Ohamaneno Harbour, on the West side of Uliatea.
12.	11 16 55 $\frac{1}{3}$	23 50 $\frac{1}{3}$	208 9 10	16 45 $\frac{1}{3}$	30,2	79	80	6	
16.	4 19 14	46 11 $\frac{1}{8}$	208 17 37 $\frac{1}{2}$	16 47	30,1	77	78 $\frac{1}{2}$	6	
17.	Noon.	70 41		16 50 $\frac{1}{2}$	30,05	78	78 $\frac{1}{2}$		
12	11 37 $\frac{2}{3}$	10 58 $\frac{2}{3}$	207 32 19	16 56				3	
18.	Noon.	70 39		17 15 $\frac{9}{10}$	29,9	77	78 $\frac{1}{2}$		
12	21 53 $\frac{2}{3}$	9 31 $\frac{3}{4}$	206 17 52	17 23	30,1	77	77 $\frac{1}{2}$	3	
2 5 11		13 31 $\frac{2}{3}$	205 53 27	17 36	29,95	77 $\frac{1}{2}$	77 $\frac{1}{2}$	6	
19.	Noon.	70 38 $\frac{1}{2}$		17 39 $\frac{5}{8}$	29,95	78	78 $\frac{1}{2}$		
2 21 51		16 45	204 45 46	17 55	29,95	77	76 $\frac{1}{2}$	6	
20.	Noon.	70 40		18 1 $\frac{1}{3}$	30,0	78	80 $\frac{1}{2}$		
2 23 29		16 42 $\frac{1}{8}$	203 52 46	18 20	29,95	77	78	6	
21.	Noon.	70 42		18 23 $\frac{1}{4}$	29,9	80	80		
12 28 34		10 3 $\frac{2}{3}$	203 32 33	18 27	30,0	77	76 $\frac{1}{2}$	6	
22.	Noon.	70 49		18 39 $\frac{2}{3}$	30,0	78	77		
23.	Noon.	70 46		19 5 $\frac{9}{10}$	30,0	74 $\frac{1}{2}$	74		
2 47 22 $\frac{1}{2}$		19 41 $\frac{1}{8}$	200 0 36	19 22	29,9	75 $\frac{1}{2}$	73 $\frac{1}{2}$	6	
24.	Noon.	70 47		19 28 $\frac{1}{2}$	30,05	76	74 $\frac{1}{2}$		
12 37 25		11 43 $\frac{3}{4}$	199 3 45	19 36	30,0	73 $\frac{1}{2}$	72 $\frac{1}{2}$	6	
25.	Noon.	70 47		19 52 $\frac{1}{3}$	30,05	75	74 $\frac{1}{2}$		
26.	12 42 11	13 56 $\frac{9}{10}$	195 9 10	20 33	29,9	71	71 $\frac{1}{2}$	5	
27.	Noon.	70 47		20 39 $\frac{1}{3}$	29,95	72	72 $\frac{1}{2}$		
28.	Noon.	70 46		21 3 $\frac{9}{10}$	30,00	72	74		
3 53 53		27 43 $\frac{2}{3}$	190 10 29	21 25	30,0	74	72	6	

ON BOARD THE ADVENTURE.

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1773.	Time by No. 1.		Altitude of the ☉'s L. L.	Longitude East of Greenwich.	Latitude of the Ship South.	Baro- meter.	Thermoms		No. of Obs.	Remarks.
	H	"					C.	D.		
♀ Oct. 22.	11	33 49 $\frac{2}{3}$	39 38	176 30 10	40 30	29,2	65	57	3	Between Cape Turnagain and the Black Head.
	12	43 2 $\frac{1}{2}$	26 58 $\frac{5}{6}$	176 28 21	40 30	29,6	62	58	6	
h — 23.	Noon.		60 22		40 53 $\frac{2}{3}$	29,55	64	56		Cape Turnagain N. N. W. $\frac{1}{2}$ W. and Flat Point S. W. $\frac{1}{2}$ W.
	10	53 19 $\frac{1}{2}$	46 36	176 9 37	40 51	29,65	64	55 $\frac{1}{2}$	6	
	13	18 26 $\frac{1}{2}$	20 54 $\frac{1}{2}$	176 15 43	40 53 $\frac{1}{2}$	29,5	63 $\frac{1}{2}$	55	6	
○ — 24.	11	12 5	43 38 $\frac{1}{2}$	175 42 51	41 30	29,4	64	60	6	Cape Pallisser W. S. W. $\frac{1}{4}$ W. dist. 8 or 9 leagues.
	13	4 43 $\frac{2}{3}$	23 34	175 37 56	41 32	29,5	62	58	6	
D — 25.	Noon.		59 39		42 18					A little hazy.
	4	11 1	26 30 $\frac{1}{2}$	175 2 23	42 55	29,65	62	55	6	
♂ — 26.	Noon.		59 45		42 32 $\frac{5}{8}$	29,6	60	54 $\frac{1}{2}$		Hazy.
♀ — 27.	Noon.		60 21 :		42 17 $\frac{2}{3}$	29,65	61	56		
	4	39 39	32 27 $\frac{3}{4}$	174 52 22 $\frac{1}{2}$	42 19	29,5	61	53	6	
u — 28.	Noon.		60 40		42 18 $\frac{1}{3}$	29,25	62	56		A little hazy.
	3	26 51 $\frac{1}{3}$	19 41 $\frac{2}{3}$	175 9 39	42 00	29,6	60	54	6	
♀ — 29.	Noon.		61 28		41 50 $\frac{3}{4}$					A little hazy.
	14	30 22 $\frac{2}{3}$	8 37 $\frac{1}{3}$	174 48 10	41 48 $\frac{1}{2}$	29,6	59	54 $\frac{1}{2}$	3	
h — 30.	Noon.		61 44		41 53 $\frac{2}{3}$	29,55	59	60		
○ — 31.	Noon.		61 26		42 31 $\frac{9}{10}$	29,7	64	64 $\frac{1}{2}$		
	14	18 47	10 50 $\frac{1}{8}$	174 57 32	42 32	29,35	57	55	6	
D Nov. 1.	3	24 3 $\frac{1}{2}$	20 30	175 1 57	41 23	29,5	60	58	6	
♂ — 2.	Noon.		62 59		41 37 $\frac{2}{3}$	29,65	61	57		
♀ — 3.	Noon.		63 35		41 20 $\frac{1}{3}$	29,75	60	53		
	13	27 26 $\frac{2}{3}$	20 22 $\frac{9}{10}$	174 56 46	41 18	29,65	59	54	6	
u — 4.	14	21 40 $\frac{1}{3}$	11 6 $\frac{2}{3}$	173 59 46	41 38	29,6	59	59	6	
h — 6.	Noon.		64 13		41 37 $\frac{3}{8}$	29,6	54	52		
○ — 7.	Noon.		66 27		39 41 $\frac{1}{6}$	29,75	57	53		
D — 8.	Noon.		67 24		39 1 $\frac{2}{3}$	29,75	62	63		Table Cape S. W. b. W. and Gable End Foreland N. W. b. N.
♂ — 9.	2	35 54	14 59 $\frac{5}{8}$	176 53 27		29,95	61	57 $\frac{1}{2}$	6	
♀ — 10.	Noon.		68 38 $\frac{1}{6}$		38 21 $\frac{1}{2}$	29,95	61 $\frac{1}{2}$	57	2	In Tolaga Bay.
	2	8 2	10 1 $\frac{9}{10}$	176 55 24		29,9	60 $\frac{1}{2}$	56	12	
u — 11.	Noon.		68 56 $\frac{3}{4}$		38 20	29,8	61	57		Off the mouth of To- laga Bay.
D — 15.	2	19 1 $\frac{2}{3}$	13 26 $\frac{9}{10}$	176 56 8		29,8	62	54	6	
♂ — 16.	Noon.		70 04		38 31 $\frac{1}{2}$	29,95	61	64		In Tolaga Bay.
	3	24 53 $\frac{2}{3}$	26 10 $\frac{3}{4}$	176 29 1 $\frac{1}{2}$	39 34	29,8	67	62 $\frac{1}{2}$	6	
♀ — 17.	Noon.		69 8		39 42 $\frac{1}{8}$	29,65	68	67		
	2	53 13 $\frac{1}{2}$	20 9 $\frac{1}{2}$	176 8 57	39 52	29,8	69	63	6	
u — 18.	Noon.		69 6		39 59	29,65	68	68		
	12	14 41	33 54 $\frac{2}{3}$	176 8 17	40 2	29,65	68	69	6	
♀ — 19.	Noon.		68 40		40 39 $\frac{1}{6}$	29,55	69	68		Very hazy.
h — 20.	Noon.		68 30 :		41 2 $\frac{9}{10}$	29,8	65	56		

1773.	Time by No. 1		Altitude of the ☉'s L. L.	Longitude East of Greenwich.	Latitude of the Ship South.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
	H	M					C.	D.		
h Nov. 20.	13	55 40	15 36 $\frac{3}{4}$	174 58 30	41 00	29,8	66	55	6	
☉ — 21.	Noon.		68 41		41 5 $\frac{3}{4}$	29,75	62	55		
	3	56 27 $\frac{1}{2}$	32 56 $\frac{3}{4}$	175 52 30	41 7	29,75	66	54	4	
D — 22.	Noon.		68 55		41 4 $\frac{1}{3}$	30,1	62	55		
	12	49 15	28 3 $\frac{3}{4}$	175 22 42	40 58	30,1	64	56	6	Cape Turnagain W. N. W. distant 7 or 8 leagues.
	14	14 9	12 27 $\frac{1}{6}$	175 13 3	40 57	30,1	64	56	6	
δ — 23.	Noon.		69 18		40 54 $\frac{1}{6}$	30,2	62	61 $\frac{1}{2}$		
	11	39 10 $\frac{1}{3}$	41 29 $\frac{2}{3}$	175 5 15	40 57	30,25	62	61 $\frac{1}{2}$	6	Cape Turnagain N. N. W. distant 5 or 6 leagues.
8 — 24.	Noon.		68 48		41 36 $\frac{1}{3}$	30,3	63	61 $\frac{1}{2}$		
4 — 25.	3	2 56	21 52 $\frac{2}{3}$	173 17 19	42 00	30,1	64	56	6	
♀ — 26.	3	45 13	29 40 $\frac{2}{3}$	173 00 30	42 01	29,95	63	56	6	
h — 27.	Noon.		69 1		41 57 $\frac{3}{8}$	29,9	64	61		
☉ — 28.	5	11 33	46 17 $\frac{3}{4}$	173 27 36	42 4	29,85	65 $\frac{1}{2}$	57 $\frac{1}{2}$	3	Hazy.
D — 29.	Noon.		69 13 :		42 6 $\frac{7}{8}$	29,85	66 $\frac{1}{2}$	60		
	5	20 43	47 59 $\frac{3}{8}$	172 53 6	41 12	30,2	63	54	6	
δ Dec. 7.	Mr. Bayley compared the watch with the clock, by which the times of equal altitudes had been noted (see p. 69.); from whence it appears, that the watch was 15 h. 36' 19",5 too slow for mean time on that day at noon; and therefore, according to its rate and state with respect to mean time at Point Venus in Otaheite, on August the 31st, the difference of longitude between that place and this will appear to be 37° 48' 43" $\frac{1}{2}$; that is, it makes this place 172° 38' 46" $\frac{1}{2}$ E. of Greenwich. If we reckon all the way from England, at the rate it was going when at Greenwich, it will place Queen Charlotte's Sound 235° 44' $\frac{3}{4}$ E. of Drake's Island in Plymouth Sound, or 231° 28' $\frac{1}{8}$ E. of Greenwich. But farther: Mr. Bayley found this watch too slow for mean time at this place, June the 7th at noon, by 13 h. 36' 58",5, and that it was then losing on mean time at the rate of 25",66 a day; according to which, it should have been too slow for mean time, on Dec. 7th, by only 14 h. 55' 14",3, instead of 15 h. 36' 19",5; the difference, 41' 5",2, = 10° 16' 18" in longitude, is what the watch has erred in half a year. The watch was found now to be losing 44",924 a day on mean time, and that it was too slow on 8 December 15th at noon by 15 h. 42' 17",46. Moreover, in computing the following longitudes of the ship, Mr. Bayley has supposed that the longitude of Queen Charlotte's Sound was 174° 1' 55" $\frac{1}{2}$ E. of Greenwich.									
8 — 22.	14	16 47	13 50 $\frac{1}{3}$	174 29 45	41 20	29,8	67	65	6	
	3	0 28	24 45 $\frac{1}{8}$	174 57 24	42 9	29,9	65	64	6	
4 — 23.	Noon.		70 50		42 25 $\frac{1}{8}$	30,1	66 $\frac{1}{2}$	66	6	
	12	43 30 $\frac{1}{3}$	30 22 $\frac{1}{8}$	175 19 51	42 29	30,0	66	65 $\frac{1}{2}$	6	
♀ — 24.	Noon.		70 14		43 00 $\frac{1}{3}$	30,0	69	64 $\frac{1}{2}$		
	14	41 28	9 49 $\frac{1}{3}$	175 10 12	43 24	30,15	66	62	6	Hazy.
h — 25.	Noon.		68 32 :		44 38 $\frac{9}{10}$	30,2	66 $\frac{1}{2}$	62		
	3	27 11 $\frac{1}{2}$	31 16 $\frac{5}{8}$	176 44 35	45 40	30,1	66	57	6	
☉ — 26.	Noon.		67 28		45 43	29,8	66	57		
	13	45 2 $\frac{2}{3}$	18 36 $\frac{1}{2}$	177 10 36	45 47	30,0	65	61 $\frac{1}{2}$	6	

1773.	Time by No. 1.		Altitude of the ☉'s L. L.	Longitude East of Greenwich.	Latitude of the Ship South.	Baro- meter.	Thermoms.		Remarks.
	H	"					C.	D.	
♂ Dec. 28.	Noon.		65 57:		47 8 $\frac{3}{4}$	30,05	64	54	Very hazy.
	4 24 52		42 8 $\frac{1}{3}$	178 44 12	47 50	29,95	62	51 $\frac{1}{2}$	
♂ — 29.	Noon.		64 55		48 7 $\frac{1}{2}$	29,9	63	54	
	3 33 3		34 28 $\frac{1}{3}$	180 31 10 $\frac{1}{2}$	50 52	29,6	56	45	6
1774.									
♂ Jan. 1.	Noon.		61 53		50 56 $\frac{7}{8}$	29,75	55	46	
	14 26 12 $\frac{1}{3}$		10 33 $\frac{5}{8}$	181 39 49	51 7	29,75	50	41	6
	4 11 55 $\frac{1}{3}$		41 54 $\frac{1}{4}$	182 51 52	51 28	29,85	52	41	6
⊙ — 2.	Noon.		61 8		51 36 $\frac{1}{4}$	30,05	57	48	
♂ — 4.	1 48 12		25 32 $\frac{1}{2}$	191 55 51	55 15	29,65	50	49	6
♂ — 5.	Noon.		56 58		55 28 $\frac{1}{4}$	29,4	62	46	
♀ — 7.	1 52 50		31 46 $\frac{7}{8}$	202 26 36	57 8	29,8	55	38	6
♂ — 8.	Noon.		54 59		57 5 $\frac{9}{10}$	29,7	60	40	
	2 5 1 $\frac{1}{2}$		33 26 $\frac{1}{8}$	202 35 21	57 8 $\frac{1}{3}$	29,75	54	36	6
⊙ — 9.	Noon.		54 28		57 28 $\frac{2}{3}$	29,65	55	38	
♂ — 10.	0 39 1		26 55 $\frac{3}{8}$	212 19 28	58 14	28,8	50	35	6
♂ — 11.	Noon.		53 21		58 18	28,65	55	36	
♂ — 12.	12 20 0 $\frac{1}{3}$		10 23	216 29 30	58 45	28,45	56	36 $\frac{1}{2}$	3
♂ — 13.	Noon.		52 35		58 45 $\frac{2}{3}$	28,55	60	41	
♀ — 14.	0 22 17 $\frac{1}{2}$		29 31 $\frac{2}{3}$	222 19 45	58 48	29,1	51	39 $\frac{1}{2}$	6
♂ — 15.	Noon.		52 10		58 48 $\frac{1}{3}$	29,0	58	38 $\frac{1}{2}$	
⊙ — 16.	Noon.		51 57::		58 50 $\frac{1}{3}$	29,5	57	40	
	0 11 16		32 28 $\frac{4}{5}$	231 27 32	59 3	29,65	50	39	6
♂ — 17.	10 22 31		47 0	Pocket }	59 11	{ ☉ N. E. $\frac{1}{2}$ N. at the first Observ. Ship's course E. $\frac{1}{2}$ N. distance run 15 miles.			
♂ — 18.	12 22 38		51 4	Watch. }					
	0 2 59		35 40 $\frac{1}{3}$	240 23 49	59 23	28,6	51	42	6
♂ — 19.	Noon.		50 47		59 24 $\frac{3}{8}$	28,75	54	41	
	6 14 29		41 1 $\frac{1}{2}$	242 4 51	59 26	28,7	59	40	6
	6 27 37		39 34 $\frac{1}{2}$	242 12 1 $\frac{1}{2}$	59 26		59	40	3
	7 29 59		32 10 $\frac{2}{3}$	242 26 14	59 28	28,4	59	39 $\frac{1}{2}$	6
♂ — 20.	Noon.		50 7		59 52 $\frac{1}{3}$	28,45	58 $\frac{1}{2}$	41 $\frac{1}{2}$	
♀ — 21.	Noon.		49 37		60 9 $\frac{2}{3}$	28,35	59	41 $\frac{1}{2}$	
	9 1 56 $\frac{2}{3}$		17 25 $\frac{1}{3}$	248 2 38	60 9 $\frac{3}{4}$	28,55	58	40	3
♂ — 22.	Noon.		50 2		59 31 $\frac{1}{4}$	28,75	56	42	
	8 55 11		16 39 $\frac{3}{4}$	250 28 34	59 23	28,5	59	40	6
	22 29 26 $\frac{1}{3}$		29 22	251 54 23	59 17	28,55	52	40	3
⊙ — 23.	Noon.		50 4		59 15 $\frac{1}{2}$	28,5	57	42	
♂ — 24.	Noon.		49 32		59 33 $\frac{1}{3}$	28,85	60	38 $\frac{1}{2}$	
	9 3 2		11 49	257 29 12	59 37	29,0	57	42	4
♀ — 28.	Noon.		46 20		61 46				
	6 39 38		20 5 $\frac{1}{2}$	274 27 34	61 47	29,25	63	41	6
	21 9 9 $\frac{1}{3}$		30 18 $\frac{1}{3}$	277 28 6	61 45				
	22 45 26		39 56	Pocket }	61 50	{ ☉ N. by E. at the first Observation. Ship's course N. E. by E. distance run 10 miles.			
♂ — 29.	0 34 11		45 46	Watch. }					
	20 25 23		27 42 $\frac{1}{8}$	282 49 57	61 37	29,4	54	41 $\frac{1}{2}$	6
⊙ — 30.	Noon.		46 0		61 34 $\frac{2}{3}$	29,35	61	42 $\frac{1}{2}$	

1774.		Time by No. 1.			Altitude of the $\odot$'s L. L.	Longitude East of Greenwich.	Latitude of the Ship S.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
		H	"	"					C.	D.		
δ	Feb. 1.	8	25	$1\frac{1}{2}$	33 54 $\frac{3}{4}$	297 40 29	60 48	29,5	54	41	6	
δ	— 2.	Noon.			46 0		60 44 $\frac{3}{4}$					
		17	46	9	16 55 $\frac{2}{3}$	301 34 27	60 39	29,5	54 $\frac{1}{2}$	41	6	
		19	34	28 $\frac{1}{3}$	30 18 $\frac{1}{2}$	302 23 12	60 38	29,5	55	41 $\frac{1}{2}$	6	
		21	07	7	39 47	Pocket Watch. }	60 36	{ $\odot$ N. $\frac{3}{4}$ E. at the first Observat. Ship's course N. E. by E. $\frac{1}{2}$ E. dist. run 12 miles.				
μ	— 3.	22	35	51	45 11							
$\odot$	— 6.	16	33	24	13 37 $\frac{1}{2}$	314 41 37	59 30	29,2	52	35	5	
δ	— 7.	Noon.			45 59		59 16 $\frac{2}{3}$	29,2	57 $\frac{1}{2}$	41		
		19	22	58	35 28 $\frac{2}{3}$	316 56 41	58 38	29,8	54	35	4	
		19	23	30	35 33 }		58 30	{ $\odot$ N. N. E. at first Observation. Ship's course N. E. $\frac{1}{2}$ N. dist. run 14 $\frac{1}{2}$ miles.				
δ	— 8.	22	26	30	46 25 }							
δ	— 9.	Noon.			47 17 $\frac{1}{2}$		57 20 $\frac{1}{2}$	29,85	57 $\frac{1}{2}$	37		
δ	— 16.	1	16	49	24 17 $\frac{1}{8}$	336 35 34	53 55	29,4	61	39	6	
δ	— 18.	19	53	10	46 30 }		54 0	{ $\odot$ N. $\frac{3}{4}$ E. at the first Observ. Ship's course N. E. by N. dist. run 2 $\frac{1}{2}$ miles.				
δ	— 19.	20	53	10	47 2 }							
		19	47	37	47 1 }		53 20	29,7	56	37		
$\odot$	— 20.	20	37	27	47 30 }							
		0	4	51	28 35 $\frac{3}{4}$	344 26 0	53 21	29,75	57	38	6	
		7	33	47	36 52	346 30 55	53 24	29,0	52	39	6	
δ	— 21.	Noon.			47 10		53 23 $\frac{4}{5}$	29,1	55	39 $\frac{1}{2}$		
		1	9	26	16 52 $\frac{2}{3}$	347 47 51	53 24	29,4	56	30 $\frac{1}{2}$	3	
		14	48	59 $\frac{1}{2}$	15 27 $\frac{1}{3}$	349 6 44	53 14	30,05	53	37	6	
δ	— 22.	Noon.			47 01		53 11 $\frac{2}{3}$	29,95	57	40		
		1	22	9 $\frac{1}{3}$	13 18 $\frac{1}{3}$	349 57 6	53 14	30,0	52	39	3	
μ	— 24.	Noon.			46 42		52 46 $\frac{3}{4}$					
		0	40	51	14 43 $\frac{2}{3}$	356 30 46	52 51	29,25	56	39 $\frac{1}{2}$	6	
		4	33	59	34 30	Pocket Watch. }	53 15	{ $\odot$ N. E. $\frac{1}{2}$ E. at the first Observation. Ship's course E. by S. 10 miles.				
		6	20	35	44 15							
δ	— 25.	4	49	26	16 13 $\frac{2}{3}$	359 53 27	53 25	29,0		38	3	Altitudes of Spica π .
δ	— 26.	14	9	16	17 11 $\frac{5}{8}$	3 21 33	53 24	29,4	49 $\frac{1}{2}$	37	6	
Here, Mr. Bayley having completed 360° of longitude, or one revolution round the globe, from the meridian of Greenwich, eastward, to the meridian of Greenwich again, rejected 360°, and repeated February 26, in order to bring his day to correspond with that at Greenwich.												
δ	— 26.	Noon.			45 56 $\frac{1}{2}$		53 27	29,6	55	37		
		23	48	12	16 10 $\frac{2}{3}$	4 55 48	53 33	29,55	59	37	6	
$\odot$	— 27.	Noon.			44 7		53 53 $\frac{2}{3}$	29,5	57	40		
δ	March 1.	23	53	26	11 8 $\frac{1}{4}$	9 56 40	53 48	28,85	57	34	6	
		15	18	27	29 55 $\frac{2}{3}$	11 9 3	54 5	29,2	52	35	6	
		15	48	26	33 26 }		54 4 $\frac{1}{2}$	{ $\odot$ N. E. by E. at the first Observ. Ship's course E. S. E. $\frac{1}{2}$ E. dist. run 7 $\frac{1}{2}$ miles.				
		17	52	40	42 25 }							
δ	— 2.	14	20	38 $\frac{1}{3}$	23 30 $\frac{5}{8}$	13 13 15	53 38	29,2	34	34	6	A high sea.
μ	— 3.	Noon.			43 12		53 17 $\frac{3}{4}$					
		23	49	54 $\frac{2}{3}$	8 41 $\frac{5}{8}$	13 30 22	52 56	29,65	56	34 $\frac{1}{2}$	6	
δ	— 5.	21	46	1	14 58		50 45 $\frac{1}{3}$	29,9	57	38		
		21	46	1	25 56 $\frac{2}{3}$	15 3 45	50 38	29,2	50	43	3	

1774.	Time by No. 1.		Altitude of the Sun's L. L.	Longitude East of Greenwich.	Latitude of the Ship South.	Barometer.	Thermom.		Z of O.	Remarks.
	H	M					C.	D.		
March 7.	Noon.		46 25		48 32 $\frac{1}{2}$	29,85	57	41		
	18 47 18		45 6 $\frac{3}{8}$		48 15	29,8		40	6	
	22 51 36		14 35 $\frac{1}{2}$	16 42 3	48 15	29,95	57	39	6	
	12 55 47 $\frac{1}{2}$		13 24	16 39 57	47 53	30,0	38	38	8	
8 — 8.	Noon.		46 57		47 36 $\frac{3}{4}$	29,75	59	40		
14 — 10.	Noon.		50 33		43 13 $\frac{4}{5}$	29,85	59	47 $\frac{1}{2}$		
	22 39 3 $\frac{3}{4}$		15 39 $\frac{1}{2}$	17 21 31	42 49	29,7	60	49	6	
2 — 11.	Noon.		51 35		41 48 $\frac{1}{8}$	30,05	61	55		
	14 5 41		27 17 $\frac{5}{8}$	17 43 37	41 24	29,8	57 $\frac{1}{2}$	61 $\frac{1}{2}$	6	
12 — 12.	12 25 14		9 13 $\frac{1}{2}$	17 38 31	40 23	29,6	62	64	6	
13 — 13.	Noon.		52 36		39 59	29,6	65	60		
	22 19 47		17 38 $\frac{1}{8}$	18 27 0	39 37	29,55	63	61	3	
	12 53 4 $\frac{1}{2}$		15 33 $\frac{1}{2}$	19 0 12	38 0	29,75	64	64 $\frac{1}{2}$	6	
14 — 14.	Noon.		54 40		37 32 $\frac{1}{2}$	29,7	65	65 $\frac{1}{2}$		
	22 34 59 $\frac{2}{3}$		14 21 $\frac{5}{8}$	18 53 0	37 3	30,0	67	62	3	
15 — 15.	Noon.		56 17		35 31 $\frac{1}{4}$	30,2	67	69		
	22 34 44 $\frac{2}{3}$		14 3 $\frac{1}{2}$	19 4 48	35 18	30,25	66	68	3	
16 — 16.	Noon.		56 47 $\frac{1}{2}$		34 37 $\frac{1}{2}$	30,05	70	69 $\frac{1}{2}$		
	20 37 3		16 29 $\frac{3}{4}$	19 21 25	34 35	30,1	69	68 $\frac{1}{2}$	6	
	12 45 33 $\frac{1}{2}$		15 21 $\frac{1}{2}$	20 0 13	34 21	30,15	68	68 $\frac{1}{2}$	6	
17 — 17.	Noon.		56 48 $\frac{1}{2}$		34 12 $\frac{9}{10}$	30,0	70	69 $\frac{1}{2}$		
	22 11 10		16 54 $\frac{1}{2}$	20 35 16 $\frac{1}{2}$	34 10	30,0	70	70	6	In sight of the Table Hill.
18 — 18.	21 52 56 $\frac{1}{2}$		20 0	20 51 25 $\frac{1}{2}$		30,0	69 $\frac{1}{2}$		6	Off the entrance into Table Bay, at the Cape of Good Hope.
23 — 23.	Mr. Bayley compared the watch with his clock, by which the times of equal altitudes of the sun had been noted, (see p. 77). From whence it appears that the watch was 6 h. 45' 23" too slow for mean time at the Cape, on that day at noon; and by comparing this with the time shewn by it at Queen Charlotte's Sound, in December last, and allowing the rate it was then going at, I find that it makes the difference of longitude between this place and that 207° 20' 53"; that is, it makes the Cape Town 21° 22' 48" east of Greenwich, or 2° 59' 33" greater than the truth. Computing all the way from England, at the rate it was going when at Greenwich, it puts the Cape Town 103° 21' 54" to the eastward of Drake's Island in Plymouth Sound, or 99° 5' 46" east of Greenwich; that is, 80° 42' 31" more than it ought to be. But farther: Mr. Bayley computed that this Watch was 1 h. 55' 12", 6 too slow for mean time, at this place, on ☉ November 22, 1772, and it was then losing at the rate of 20", 2727, &c. a day: consequently, it should have been too slow on March 23, 1774, by 4 h. 5' 37" 87 only, instead of 6 h. 45' 23": the difference, 2 h. 39' 45" 13 = 39° 56' 17" in Longitude, is what the Watch has erred from itself in 16 months. Lastly, Mr. Bayley found that it was now losing 1' 3", 668 a day on mean time, and that it was too slow on ☉, April the 10th, at noon, by 7 h. 4' 29" 9; on which suppositions, and that the Longitude of the Cape Town is 18° 23' East, the following Longitudes of the ship are computed.									

1774.	Time by No. 1.	Altitude of the ☉'s L. L.	Longitude East of Greenwich.	Latitude of the Ship South.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
						C.	D.		
h April 16.	20 44 12 ² / ₃	18 42 ⁹ / ₁₀	18 22 28	33 49	30,05	72	—	6	Cape Town S. S. E.
	12 37 14	15 21 ¹ / ₈	17 35 44	33 18	30,1	68	64	5	
☉ — 17.	Noon.	46 1 ¹ / ₂		33 12 ³ / ₄	30,15	65	65		
☽ — 18.	12 42 59 ¹ / ₂	15 41 ² / ₃	16 21 48	32 58	29,87	68 ¹ / ₂	64	5	
♂ — 19.	Noon.	45 28		33 4 ¹ / ₂	29,9	70	66		
	12 10 53 ² / ₃	9 35 ¹ / ₈	16 15 9	32 38	30,15	70	64	6	
♀ — 20.	Noon.	45 38		32 33 ⁹ / ₁₀	30,1	69	71		
	20 27 25	22 16 ¹ / ₃	16 2 15	32 28	30,0		64	6	
	13 5 47 ¹ / ₂	19 28 ¹ / ₈	14 42 0	31 26 ¹ / ₂	30,05	70	63 ¹ / ₂	6	
♂ — 21.	Noon.	46 38		31 13 ¹ / ₂	29,85	70	63 ¹ / ₂		
	12 21 54 ¹ / ₂	10 9 ³ / ₄	13 3 58 ¹ / ₂	30 23	29,9	68	63	6	
♀ — 22.	Noon.	47 15		30 16 ¹ / ₅	29,85	68 ¹ / ₂	66 ¹ / ₂		
	21 57 30	7 16 ¹ / ₃	13 3 48	30 08	29,95	67	64	6	
	12 6 28 ² / ₃	7 25 ¹ / ₃	13 8 15	29 27	30,05	69	65	6	
h — 23.	Noon.	47 55:		29 14 ² / ₃	30,0	70	66		
☉ — 24.	Noon.	49 6 ¹ / ₂		27 44 ¹ / ₄	30,0	68	66		
	13 36 10	23 54 ² / ₃	9 31 18	26 23	30,0	67	64 ¹ / ₂	6	
☽ — 25.	Noon.	50 18		26 13 ¹ / ₈	29,9	70 ¹ / ₂	67		
	12 31 18	10 6 ¹ / ₁₂	8 14 22	25 6	30,15	67	66	6	
♂ — 26.	Noon.	51 14		24 57 ² / ₃	30,0	70	69 ¹ / ₂		
	12 20 41 ¹ / ₂	7 16 ³ / ₄	6 44 0	24 2	30,05	71	66 ¹ / ₂	6	
♀ — 27.	Noon.	52 4 ¹ / ₂		23 47 ⁷ / ₈	29,9	69	70		
	13 28 1 ¹ / ₂	20 56 ² / ₃	5 51 22	22 58	29,85	70	66	6	
♂ — 28.	Noon.	52 44 ¹ / ₂		22 49	29,9	69	69 ¹ / ₂		
♀ — 29.	Noon.	53 21		21 53	29,95	71 ¹ / ₂	75		
	22 20 29	9 51	4 9 5	21 45	29,95	70	68	6	
	12 29 52 ¹ / ₂	7 50 ¹ / ₂	3 43 1	21 28	30,0	71	69	6	
h — 30.	Noon.	53 35		21 21 ² / ₃	30,0	72	77 ¹ / ₂		
	13 6 11	15 22 ² / ₃	3 0 2	20 56	30,0	—	69 ¹ / ₂	6	
☉ May 1.	Noon.	53 46 ² / ₃		20 51 ² / ₃	30,1	73	76		
	14 22 28	30 53 ⁷ / ₈	2 23 36	20 30	30,0	73	70 ¹ / ₂	6	
☽ — 2.	Noon.	53 58		20 22 ¹ / ₂	29,95	73 ¹ / ₂	70 ¹ / ₂		
	12 31 30	7 38	2 1 22	19 39	30,0	73 ¹ / ₂	69 ¹ / ₂	6	
♂ — 3.	Noon.	54 30		19 32 ² / ₃	30,0	74	74 ¹ / ₂		
	13 3 51	14 40 ¹ / ₂	1 45 24	19 29	30,0	72	71 ¹ / ₂	6	
♀ — 4.	Noon.	54 18		19 27 ¹ / ₃	30,0	74	76		
	14 15 43	29 22 ¹ / ₃	1 2 53	18 57	30,0	72	71 ¹ / ₂	6	
♂ — 5.	Noon.	54 40 ¹ / ₂		18 47 ² / ₃	30,05	72	73 ¹ / ₂		
	22 42 32 ¹ / ₃	6 42 ¹ / ₆	0 41 48 West.	18 37	30,0	73	70	3	
	12 54 58	11 53	0 18 33	17 57	29,9	73	70 ¹ / ₂	6	
♀ — 6.	Noon.	55 30		17 40 ⁹ / ₁₀	30,0	73	73 ¹ / ₂		
h — 7.	Noon.	56 5		16 49 ¹ / ₈	29,95	73	75		
☉ — 8.	Noon.	56 49 ¹ / ₂		15 48 ³ / ₈	30,0	72	74 ¹ / ₂		
	21 44 44 ¹ / ₃	22 41 ¹ / ₃	2 58 3	15 41	30,05	72	69	6	
☽ — 9.	22 11 15 ¹ / ₂	18 12 ⁵ / ₆	4 18 18	14 36	30,15	73	70	6	

ON BOARD THE ADVENTURE.

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1774.	Time by No. 1.		Altitude of the ☉'s L. L.	Longitude West of Greenwich.	Latitude of the Ship South.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
	H	"					C.	D.		
♂ May 10.	Noon.		58 42 $\frac{1}{2}$		13 23 $\frac{1}{4}$	30,15	76	75		
	22 3 15		21 42 $\frac{1}{2}$	5 58 34	13 8	30,15	76	71	2	
♀ — 11.	Noon.		59 48		12 2 $\frac{1}{4}$	30,15	76	75		
	22 27 32		17 56 $\frac{1}{2}$	7 33 50	11 49	29,8	76	72	6	
	12 51 44		7 25 $\frac{1}{8}$	8 18 45	9 32	30,0	76	75	3	
♂ — 12.	Noon.		60 52		10 43 $\frac{1}{4}$	29,95	77	77		
	13 54 55		21 8 $\frac{1}{2}$	9 48 10	9 32	30,0	77	76	6	
♀ — 13.	Noon.		62 5		9 14 $\frac{1}{8}$	29,95	78	80		
	22 58 16 $\frac{1}{2}$		14 0 $\frac{1}{10}$	10 24 27	8 58	30,0	77	73	6	
	13 11 13		10 25	11 23 43	8 14	29,95	78	75	6	
♂ — 14.	Noon.		63 9		7 55 $\frac{1}{2}$	30,0	79 $\frac{1}{2}$	80 $\frac{1}{2}$		
	13 30 23		14 10 $\frac{3}{4}$	12 51 7	6 51	29,8	78 $\frac{1}{2}$	77 $\frac{1}{2}$	6	
☉ — 15.	Noon.		64 14 $\frac{1}{2}$		6 33 $\frac{1}{3}$	29,85	80	81 $\frac{1}{2}$		
	23 19 35 $\frac{1}{2}$		12 18 $\frac{2}{3}$	13 27 32	6 16	29,9	81	81	6	
	13 14 31 $\frac{1}{3}$		9 51 $\frac{1}{4}$	14 23 32	5 30	29,85	79	78 $\frac{1}{2}$	6	
♂ — 16.	Noon.		65 23		5 14 $\frac{2}{3}$	29,9	82	82 $\frac{1}{2}$		
	23 20 37 $\frac{1}{2}$		13 34 $\frac{1}{4}$	14 53 13	4 58	29,95	81	82	6	
	13 26 45		11 59 $\frac{9}{10}$	15 44 39	4 15	30,0	80 $\frac{1}{2}$	79 $\frac{1}{2}$	6	
♂ — 17.	Noon.		66 24		3 59 $\frac{3}{4}$	29,9	79	78 $\frac{1}{2}$		
	23 15 24		16 18 $\frac{1}{2}$	16 20 34	3 41	29,9	81	80 $\frac{1}{2}$	6	
	13 28 32		11 39 $\frac{1}{10}$	17 18 48	2 52	29,95	79	78 $\frac{1}{2}$	6	
♀ — 18.	Noon.		67 35		2 35 $\frac{1}{3}$	30,0	79 $\frac{1}{2}$	81 $\frac{1}{2}$		
	23 27 20		15 12 $\frac{3}{8}$	17 54 2	2 20	30,0	81 $\frac{1}{2}$	80 $\frac{1}{2}$	6	
	13 11 39		7 18 $\frac{9}{10}$	18 33 42	1 20	30,0	78 $\frac{1}{2}$	77	3	
♂ — 19.	Noon.		68 59		0 58 $\frac{1}{2}$	30,0	79	80		
	23 20 11 $\frac{2}{3}$		17 58 $\frac{1}{3}$	18 45 55	0 43	30,0	80	80 $\frac{1}{2}$	6	
					North.					
♀ — 20.	Noon.		70 6		0 21 $\frac{1}{2}$					
	21 10 19		21 1 $\frac{1}{8}$	19 20 53	0 34	29,9		80	6	
	23 47 58		12 17 $\frac{1}{10}$	19 23 0	0 35	29,9	79 $\frac{1}{2}$	80 $\frac{1}{2}$	3	
♂ — 21.	Noon.		70 57		1 24 $\frac{1}{3}$	29,95	79 $\frac{1}{2}$	80		
	0 14 19 $\frac{1}{3}$		7 17 $\frac{1}{4}$	20 27 34	1 38	29,9	80	79 $\frac{1}{2}$	3	
	14 36 11		26 36 $\frac{1}{8}$	21 10 34	2 37	29,9	79	80	6	
☉ — 22.	Noon.		72 15		2 54 $\frac{1}{2}$	29,95	82 $\frac{1}{2}$	82 $\frac{1}{2}$		
	14 23 46		23 48 $\frac{3}{4}$	21 48 25	3 55	30,0	80 $\frac{1}{2}$	79	3	
♂ — 23.	Noon.		73 14 ::		4 5 $\frac{1}{10}$	30,0	82	83		Very hazy.
	15 38 18		41 17 $\frac{5}{8}$	21 55 30	4 27	29,95			6	
♀ — 24.	Noon.		73 34 $\frac{1}{2}$		4 36 $\frac{7}{8}$	29,95	80	79		
	13 28 1 $\frac{1}{3}$		11 43 $\frac{3}{4}$	21 50 2	5 19 $\frac{1}{2}$	29,95	80	78	6	
♂ — 25.	Noon.		74 14		5 27 $\frac{1}{8}$	30,1	83	82		
	13 29 40 $\frac{1}{3}$		12 32 $\frac{3}{5}$	21 48 18	5 51	30,05	82	81	3	
♂ — 26.	Noon.		74 32		5 55 $\frac{3}{5}$					
	13 35 52 $\frac{1}{2}$		14 4 $\frac{3}{8}$	21 56 8	6 0	29,9	81	77	6	
♀ — 27.	Noon.		74 25 $\frac{1}{2}$		5 59 $\frac{1}{4}$	30,0	82 $\frac{1}{2}$	81 $\frac{1}{4}$		
♂ — 28.	Noon.		74 38 :		6 21 $\frac{1}{2}$	29,9	81	77		Hazy.
	23 7 44 $\frac{2}{3}$		24 32 $\frac{4}{5}$	22 19 3	6 26	29,95	81 $\frac{1}{2}$	80	6	

1774.	Time by No. 1.	Altitude of the ☉'s L. I.	Longitude West of Greenwich.	Latitude of the Ship North.	Baro- meter.	Thermoms		No. of Obs.	Remarks.
						C.	D.		
☉ May 29.	Noon.	74 45		6 37 $\frac{7}{8}$	29,95	80	79		
☽ — 30.	16 20 55	53 23 $\frac{3}{8}$	21 24 15	6 36	29,95	78	77	3	
☿ — 31.	Noon.	74 26 $\frac{1}{2}$		6 36 $\frac{3}{8}$	30,05	80	79 $\frac{1}{2}$		
	23 12 50	21 59 $\frac{3}{8}$	21 24 54	6 38	30,0	79	76	6	
	14 6 28 $\frac{3}{4}$	23 7 $\frac{3}{4}$	21 21 6	6 46	30,05	79	79 $\frac{1}{2}$	6	
☿ June 1.	Noon.	74 29 $\frac{1}{3}$		6 47 $\frac{9}{10}$	30,0	81 $\frac{1}{2}$	81		
☿ — 2.	13 31 7	15 30	21 0 15	7 5	30,0		79 $\frac{1}{2}$	6	
☿ — 3.	Noon.	74 41		7 7 $\frac{1}{2}$	30,0	80 $\frac{1}{2}$	81		
	13 20 46	12 29 $\frac{1}{10}$	22 3 11	7 10	30,0	79	79 $\frac{1}{2}$	6	
☿ — 4.	Noon.	74 36		7 10 $\frac{9}{10}$	30,0	80	80		
	13 15 8	10 58 $\frac{1}{12}$	22 41 37	7 35	29,95	79	78 $\frac{1}{2}$	6	
☿ — 5.	Noon.	74 58 $\frac{1}{2}$		7 39 $\frac{1}{10}$	30,0	80	81		
☽ — 6.	15 4 46	13 48 $\frac{1}{3}$	23 28 50	7 56	30,0	79	77 $\frac{1}{2}$	3	
☉ — 7.	Noon.	75 11 $\frac{1}{2}$		7 59 $\frac{1}{4}$	29,9	80	80		
☽ — 8.	Noon.	75 20		8 14	30,0	80 $\frac{1}{2}$	81		
	23 33 52	19 0 $\frac{1}{4}$	24 10 54	8 20	30,0	80	78	6	
	14 30 48	27 28 $\frac{1}{2}$	24 56 53	9 7	30,0	79	78	6	
☿ — 9.	Noon.	76 15		9 14 $\frac{7}{8}$	30,0	80 $\frac{1}{2}$	80		
	15 20 41	38 18 $\frac{5}{8}$	26 19 49	10 20	30,0	78	77	3	
☿ — 10.	Noon.	77 23 $\frac{1}{2}$		10 28 $\frac{1}{12}$	29,8	79	79 $\frac{1}{2}$		
	14 2 43	19 59 $\frac{7}{8}$	27 27 36	11 37	29,9	77	77	6	
☿ — 11.	Noon.	78 41		11 51 $\frac{1}{2}$	29,95	79	79 $\frac{1}{2}$		
	14 1 51	19 22 $\frac{2}{3}$	28 43 22	13 3	29,95	77	76	6	
☿ — 12.	Noon.	80 2		13 18 $\frac{1}{4}$	30,05	77 $\frac{1}{2}$	77 $\frac{1}{2}$		
	13 27 55	11 13 $\frac{9}{10}$	29 56 18	14 23 $\frac{1}{2}$	29,85	77	74	6	
☿ — 13.	Noon.	81 22 $\frac{1}{2}$		14 42	30,0	76 $\frac{1}{2}$	76 $\frac{1}{2}$		
	14 6 57	19 38 $\frac{5}{8}$	31 13 57	16 3	30,0	76	74	3	
☉ — 14.	Noon.	83 0		16 23 $\frac{1}{2}$	30,0	76	76		
	0 47 49	10 56 $\frac{5}{8}$	31 45 6	16 48	30,0	76	74	3	
☽ — 15.	Noon.	84 17 $\frac{1}{2}$		17 44 $\frac{1}{2}$	30,0	76 $\frac{1}{2}$	75		
	23 52 51	24 8 $\frac{7}{8}$	32 27 18	18 0	30,0	76	74 $\frac{1}{2}$	6	
	14 14 29	21 21 $\frac{7}{8}$	32 39 47	18 58	30,0	75 $\frac{1}{2}$	74	6	
☿ — 16.	Noon.	85 43 $\frac{1}{2}$		19 13 $\frac{1}{2}$	29,95	76 $\frac{1}{2}$	77		
	0 37 15 $\frac{1}{3}$	14 47 $\frac{1}{12}$	32 44 42	19 29 $\frac{1}{2}$	30,05	76	75	6	
	13 40 29	15 15 $\frac{1}{8}$	33 4 41	20 24	30,1	76	75	6	
☿ — 17.	Noon.	87 16 $\frac{3}{4}$		20 49 $\frac{2}{3}$	30,05	76	76		
	0 17 31	20 0 $\frac{3}{8}$	33 18 14	21 10	30,0	76	75	6	
☿ — 18.	Noon.	88 47		22 21 $\frac{9}{10}$	30,15	77	77 $\frac{1}{2}$		
	23 30 42 $\frac{1}{3}$	31 17 $\frac{9}{10}$	34 3 2	22 35	30,15	76	76	6	
	13 29 22	11 48 $\frac{1}{4}$	34 40 52	23 28 $\frac{1}{2}$	30,15	76 $\frac{1}{2}$	76	6	
☿ — 19.	Noon.	89 28		23 45 $\frac{1}{3}$	30,2	78 $\frac{1}{2}$	79		
	0 18 56	21 33 $\frac{1}{8}$	34 51 57	23 58	30,2	78	78 $\frac{1}{2}$	6	
	13 44 57	15 24 $\frac{3}{4}$	35 6 30	24 48	30,25	77 $\frac{1}{2}$	76	6	
☿ — 20.	Noon.	88 5		25 9 $\frac{1}{2}$	30,25	78	77 $\frac{1}{2}$		
	0 56 46 $\frac{1}{2}$	4 0 $\frac{2}{3}$	35 14 29	25 27	30,2		77	6	
☉ — 21.	Noon.	86 41 $\frac{2}{3}$		26 33 $\frac{4}{5}$	30,2	77	77 $\frac{1}{2}$		

ON BOARD THE ADVENTURE.

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1774.	Time by No. 1.		Altitude of the ☉'s L. L.	Longitude West of Greenwich.	Latitude of the Ship North.	Baro- meter.	Thermoms.		Z of Ob.	Remarks.
	H	"					C.	D.		
☉ June 19.	0	19 22	22 18 $\frac{1}{8}$	35 16 37	26 52	30,2	77	75	6	
	13	52 4	18 10 $\frac{1}{8}$	35 7 35	27 42	30,2	76 $\frac{1}{2}$	75 $\frac{1}{2}$	6	
☽ — 20.	Noon.		85 16		28 0 $\frac{1}{10}$	30,3	77	76 $\frac{1}{2}$		
	13	46 43	17 38	35 6 12	28 58	30,3	77	74 $\frac{1}{2}$	6	
☿ — 21.	Noon.		83 59		29 17 $\frac{1}{4}$	30,25	79	77		
	14	3 53	21 37 $\frac{1}{4}$	35 23 12	30 34	30,3	78	75	6	
♄ — 22.	Noon.		82 21		30 55	30,3	76	75		
	13	19 31	13 7 $\frac{1}{2}$	35 31 36	32 13	30,3	76	75	6	
♃ — 23.	Noon.		80 36		32 39 $\frac{2}{3}$	30,3	76	74		
	1	19 26 $\frac{1}{3}$	11 28 $\frac{1}{3}$	35 41 19	33 2	30,2	76	74 $\frac{1}{2}$	6	
	14	0 5	21 28 $\frac{1}{3}$	36 6 45	34 2	30,35	76	72 $\frac{1}{2}$	6	
♀ — 24.	Noon.		78 50 $\frac{3}{4}$		34 23 $\frac{1}{2}$	30,45	74	73 $\frac{1}{2}$		
♂ — 25.	Noon.		77 16 $\frac{1}{2}$		35 56 $\frac{1}{4}$	30,45	74	73 $\frac{1}{2}$		
☉ — 26.	Noon.		76 0		37 50	30,35	73 $\frac{1}{2}$	72		
	23	7 31	38 8 $\frac{1}{2}$	35 50 6	37 22	30,25	74	72	6	
	14	21 1 $\frac{1}{3}$	27 26 $\frac{3}{8}$	35 15 57	37 33	30,3	73	71	6	
☽ — 27.	Noon.		75 23		37 45 $\frac{1}{3}$	30,3	74	73		
	13	49 0 $\frac{1}{2}$	22 0 $\frac{1}{3}$	34 22 5	37 51 $\frac{1}{2}$	30,1		71	6	
☿ — 28.	Noon.		75 12 $\frac{3}{4}$		37 53 $\frac{1}{3}$	30,4	73	76		
	12	51 31	12 6 $\frac{1}{2}$	33 45 34	38 31	30,2		72	6	
	13	10 23	15 36 $\frac{1}{3}$	33 44 54	38 31	30,2		72	6	
♄ — 29.	Noon.		74 22 $\frac{1}{2}$		38 40 $\frac{1}{2}$	30,35	75	74 $\frac{1}{2}$		
	14	13 2	28 26 $\frac{1}{2}$	32 43 41	39 3 $\frac{1}{2}$	30,4		73	6	
	14	43 44	34 22 $\frac{1}{3}$	32 45 36	39 4	30,4		73	5	
♃ — 30.	Noon.		73 46 $\frac{1}{8}$		39 13	30,4	74 $\frac{1}{2}$	76		
	16	15 56 $\frac{1}{2}$	53 26 $\frac{5}{8}$	30 57 20	39 57	30,4	75	73	6	
♀ July 1.	Noon.		72 49		40 6 $\frac{1}{4}$	30,3	73 $\frac{1}{2}$	74 $\frac{1}{2}$		
♂ — 2.	Noon.		72 11 $\frac{1}{2}$		40 50 $\frac{7}{8}$	30,15	72	66		Hazy.
	23	45 2 $\frac{1}{3}$	24 47 $\frac{1}{3}$	29 7 37	41 0	30,15	73	71	6	
☉ — 3.	Noon.		71 13 $\frac{1}{3}$		41 32 $\frac{3}{4}$	30,1	72	70 $\frac{1}{2}$		
	23	50 4	22 25 $\frac{1}{8}$	27 4 24	41 51	30,05	73	71 $\frac{1}{2}$	6	
	13	54 50	31 18 $\frac{1}{8}$	25 32 33	42 33	30,15	72	70	6	
☽ — 4.	Noon.		69 57		42 44	30,1	72	72		
	15	2 12 $\frac{1}{2}$	45 21 $\frac{1}{10}$	23 1 54	43 48	30,0	72	71	6	
	16	55 19	63 18		44 1	☉ S. S. E. at the first Observation. Ship's course E. N. E. $\frac{1}{2}$ E. at the rate of 6 miles an hour.				
☿ — 5.		18 20 0	68 32		45 22	29,8	71	67	6	
	12	55 25 $\frac{2}{3}$	24 43 $\frac{1}{2}$	20 32 17	45 22	☉ S. S. E. at the first Observation, and S. by W. at the second. Ship's course E. N. E. $\frac{1}{2}$ N. at the rate of 7 miles an hour.				
	16	51 0	62 50 $\frac{3}{4}$		45 45 $\frac{1}{8}$					
♄ — 6.		18 28 0	66 2		45 46 $\frac{1}{2}$					
	20	11 11	54 42		46 55	29,85	56	56	6	
♃ — 7.	Noon.		65 13 $\frac{1}{2}$	17 5 3	47 9 $\frac{7}{8}$	29,85	63	59		
	13	5 37 $\frac{1}{2}$	31 15 $\frac{3}{4}$	14 0 30	47 56	29,95	69	57 $\frac{1}{2}$	6	
♀ — 8.	Noon.		64 11 $\frac{1}{2}$		48 5 $\frac{1}{3}$	29,9	62 $\frac{1}{2}$	58		
	13	27 57	35 7 $\frac{1}{8}$	10 41 47	49 0	29,9	59	57	6	

1774.	Time by No. 1.		Altitude of the ☉'s L. L.	Longitude West of Greenwich.	Latitude of the Ship North.	Baro- meter.	Thermoms.		No. of Obs.	Remarks.
	H	"					C.	D.		
h July 9.	Noon.		63 0 $\frac{1}{2}$		49 9 $\frac{1}{2}$	29,95	62	57		
	22 53 1		20 3	9 13 55	49 14	29,9	63	57	4	
	13 25 49		39 2 $\frac{5}{8}$	7 10 2	49 19	30,0	62	56 $\frac{1}{2}$	6	
	16 2 20		60 0							
☉ — 10.	17 11 10		62 39		49 21 $\frac{3}{4}$					☉ S. at the first Observation. Ship's course E. S. E. $\frac{1}{2}$ E. at the rate of 6 $\frac{1}{2}$ miles an hour.
	12 21 34 $\frac{1}{3}$		30 27 $\frac{2}{3}$	4 27 35	49 26	30,05	61	57	6	
D — 11.	Noon.		62 27	East.	49 27 $\frac{1}{2}$					
☿ — 12.	22 3 52		20 59 $\frac{1}{2}$	0 33 16 $\frac{1}{2}$	49 38				6	
	12 55 1		40 19	2 33 13	49 58				6	
♃ — 14.	11 23 42 $\frac{2}{3}$		28 0 $\frac{3}{4}$	5 54 33	50 45 $\frac{1}{2}$	30,2	57 $\frac{1}{2}$	56	6	On board the ship at Spithead.
♀ — 15.	11 14 29		26 38 $\frac{3}{4}$	5 59 46 $\frac{1}{2}$		30,18	59	57	6	
☉ — 17.	11 14 15 $\frac{1}{2}$		26 48 $\frac{1}{2}$	6 12 37		30,22	57	54	6	
D — 18.	11 32 48		29 47 $\frac{2}{3}$	6 16 53		30,24	56 $\frac{1}{2}$	55 $\frac{1}{2}$	5	

According to the rate this Watch was going at when at Greenwich, before we left England, and the time it was set to at Drake's Island, in Plymouth Sound, July the 10th, 1772, it ought to have been too fast, for mean time, at that place, when the Observation of July the 14th, 1774, was taken, by 9' 35", 6: Mr. Bayley then found it too slow for mean time, at Spithead, by 7 h. 56' 11", 74; the Watch, therefore, places Spithead 8 h. 5' 47" 34, = 121° 26' 50" to the East of Plymouth Sound; but as it is only 3° 9' 15" to the East of it, the difference, 118° 17' 35", is the Watch's error in the course of the whole voyage; that is, in two years and five days.

Mr. Bayley went round with the Watch, in the ship, into the river; and July 27th delivered it at the Royal Observatory at Greenwich, when he found that at 8 h. 55' by the Watch, the transit Clock shewed 13 h 32' 24": the Sun's transit, that day, was at 8 h. 23' 53", 86 by the Clock; from whence it appears that the mean time of comparing the Watch was 5 h. 13' 41", 5; and of course the Watch was too fast for mean time, at Greenwich, by 3 h. 41' 18", 5. This Watch gained at the rate of 0", 8 a day on mean time from April 13 to April 25, 1772, before it went on the voyage, and it lost at the rate of 1' 21", 89 a day, on mean time, from July 21 to the 27th, 1774, after its return.

I think the titles at the tops of the several columns will sufficiently explain themselves; but it may be necessary to remark, that the Thermometer marked C was kept in the cabin, close to the Watches, and that marked D was in the open air, upon deck, but kept shaded from the sun.

O B S E R V A T I O N S

O F T H E

MOON'S Distance from the SUN and Fixed STARS, for
determining the LONGITUDE at Sea,

Made on Board his MAJESTY'S Sloop ADVENTURE, in her late Voyage on
Discoveries towards the South.

By Mr. WILLIAM BAYLEY.

REPORT OF THE

COMMISSIONER

OF THE LAND OFFICE

IN RESPONSE TO A RESOLUTION

PASSED BY THE HOUSE OF REPRESENTATIVES

ON FEBRUARY 1, 1882

AND

1772.	Time by No. 1	Distance D's L. from ☉'s or *.	Altitude of the ☉'s L. L. or *	Moon's Altitude.	Longitude West of Greenwich.	Latitude of the Ship N.	No. of Thermom.	Objects.
	H	° ' "	° ' "	° ' "	° ' "	° ' "		
♂ July 21.		94 37 40	52 46 $\frac{1}{2}$	25 12 U.	9 29 $\frac{1}{2}$	43 36	2	☽ and ☉.
♂ — 22.		83 58 0	40 52	46 40 $\frac{1}{2}$ U.	11 9	42 27	3	☽ and ☉.
♂ — 23.		73 24 12	13 15 $\frac{1}{2}$	62 12 $\frac{1}{2}$ L.	11 34 $\frac{1}{2}$	40 34	669	☽ and ☉.
♂ Aug. 4.	4 42 54	72 54 30	37 51 $\frac{1}{2}$	49 23 $\frac{1}{2}$ U.	18 28	28 29	473	☽ and ☉.
	6 50 28	73 35 56	10 10 $\frac{1}{2}$	47 10 $\frac{1}{2}$ L.	17 50 $\frac{1}{2}$	28 25	473	☽ and ☉.
	9 47 6	38 49 10	31 14 $\frac{1}{2}$	19 15 L.	17 53	28 20	372	☽ and An- tares.
♂ — 5.	5 22 41	86 27 27	29 18 $\frac{3}{4}$	45 28 $\frac{3}{4}$ U.	18 55 $\frac{1}{2}$	27 31 $\frac{1}{2}$	573	☽ and ☉.
	5 52 53	86 36 0	22 38 $\frac{1}{2}$	47 27 $\frac{1}{2}$ U.	18 41 $\frac{1}{2}$	27 31 $\frac{1}{2}$	473	☽ and ☉.
☽ — 10.	8 32 41	43 56 7 $\frac{1}{2}$	46 19	37 18 U.	22 21 $\frac{1}{2}$	17 24	278	☽ and An- tares.
	9 11 21		43 41				278	Arcturus.
♂ — 18.	18 24 44	34 58 0	71 40	22 27 U.	20 49 $\frac{1}{2}$	10 54	176	☽ and Al- debaran.
	19 53 24 $\frac{1}{2}$	114 6 25	13 19	50 55 $\frac{1}{2}$ U.	20 57 $\frac{1}{2}$	10 47	376	☽ and ☉.
♂ Sept. 1.	3 26 42	55 5 15	38 21 $\frac{1}{2}$	76 14	5 53 $\frac{1}{2}$	1 55	478	☽ and ☉.
♂ — 3.	7 14 54	56 54 20	63 12 $\frac{1}{2}$	58 35 $\frac{1}{2}$ L.	8 49 $\frac{1}{2}$	0 55	375 $\frac{1}{2}$	☽ and ☉ Aquilæ.
♀ — 4.	3 0 58	94 57 27	47 44 $\frac{3}{8}$	36 10 $\frac{1}{2}$ U.	9 35	0 49	677	☽ and ☉.
♂ — 5.	3 22 26	107 11 15	42 39 $\frac{1}{2}$	28 48 U.	9 40 $\frac{2}{5}$	0 55	376 $\frac{1}{2}$	☽ and ☉.
	5 41 22	107 53 25	7 59	58 23 $\frac{1}{2}$ U.	9 51 $\frac{1}{2}$	0 55	376	☽ and ☉.
☉ — 6.	4 55 35	119 52 15	18 12 $\frac{1}{2}$	39 18 $\frac{1}{2}$ U.	9 17	0 31 South.	476	☽ and ☉.
♀ — 11.	10 19 57	54 59 0	61 51	59 45 $\frac{1}{2}$ L.	12 39 $\frac{1}{2}$	3 30	372	☽ and ☉ Aquilæ.
	11 20 48	44 38 20	31 1 $\frac{1}{2}$	74 37 L.	12 21	3 30	370	☽ and ☉ Arietis.
♂ — 17.	20 43 9	110 27 54	28 29 $\frac{1}{2}$	30 25 $\frac{1}{2}$ U.	17 33 $\frac{1}{2}$	12 11	573 $\frac{1}{2}$	☽ and ☉.
♂ — 19.	19 52 29	87 32 48	14 54	53 17 U.	19 7 $\frac{1}{5}$	15 19	5	☽ and ☉.
☽ — 21.	20 52 43	62 36 50	27 48 $\frac{3}{4}$	55 42 $\frac{1}{2}$ U.	20 32	18 25 $\frac{1}{2}$	3	☽ and ☉.
	23 19 38	61 51 0	60 7 $\frac{1}{2}$	39 46 $\frac{1}{2}$ U.	20 32 $\frac{1}{4}$	18 36	3	☽ and ☉.
♂ — 22.	23 22 51	48 45 52	59 50 $\frac{1}{2}$	49 18 $\frac{1}{2}$ U.	21 28	20 1	573	☽ and ☉.
♂ — 23.	21 37 48	35 47 9	37 7 $\frac{3}{8}$	56 17 $\frac{1}{2}$ U.	21 58 $\frac{1}{2}$	21 20	472 $\frac{1}{2}$	☽ and ☉.
♂ — 29.	4 20 35	37 5 5	34 48 $\frac{2}{3}$	70 35 $\frac{1}{2}$ L.	21 40	26 14	3	☽ and ☉.
♂ Oct. 1.	3 45 43 $\frac{1}{2}$	64 10 31	38 29	72 16 U.	18 9 $\frac{1}{4}$	27 27	569	☽ and ☉.
	4 17 59	64 20 26	31 35 $\frac{1}{2}$	77 58 $\frac{1}{2}$ U.	17 59 $\frac{1}{4}$	27 26	669	☽ and ☉.
♀ — 2.	4 29 51	77 21 3	28 3 $\frac{7}{8}$	70 56 U.	17 13	27 38	469	☽ and ☉.
♂ — 3.	5 12 28	90 5 22	17 16	69 23 U.	15 41 $\frac{1}{2}$	28 9	363	☽ and ☉.
☉ — 4.	5 45 14 $\frac{1}{2}$	102 18 27	7 59	66 33 $\frac{1}{2}$ U.	13 45 $\frac{1}{2}$	29 7	358	☽ and ☉.
☽ — 5.	2 58 5	113 8 57	42 44 $\frac{1}{2}$	21 45 $\frac{1}{2}$ U.	12 2 $\frac{3}{4}$	28 56	659	☽ and ☉.
	3 29 34	113 22 10	36 8	28 26 U.	12 0 $\frac{1}{4}$	28 53	359	☽ and ☉.
	3 58 30 $\frac{2}{3}$	113 33 32	30 2 $\frac{1}{2}$	34 34 $\frac{1}{2}$ U.	12 16	28 52	359	☽ and ☉.
♂ — 10.	7 50 38	72 24 35	42 26 $\frac{1}{2}$	27 15 L.	7 39 $\frac{1}{2}$	34 36	357	☽ and ☉ Aquilæ.
	10 12 25	73 5 0	20 57 $\frac{1}{2}$	46 54 $\frac{1}{2}$ L.	7 30 $\frac{3}{4}$	34 41	357	☽ and ☉ Aquilæ.

1772.	Time by No. 1		Distance D's	Altitude of	Moon's	Longitude	Latitude	No. of Obs.	Thermom.	Objects.	
	H	"	L. from ☉'s or *.	the ☉'s L. L. or *	Altitude.	West of Greenwich.	of the Ship S.				
○ Oct. 11.	6 59 56		{ Apparent time, end of the Lunar Eclipse. }								By W. Bayley.
	7 0 26										By Capt. Furneaux.
	9 45 37		83 50 18	24 18 $\frac{3}{4}$	36 21 $\frac{3}{4}$ L.	6 5 $\frac{3}{8}$	34 46	4 57		{ D and α Aquilæ.	
	10 57 12		44 15 35	13 34	43 54 $\frac{1}{2}$ L.	6 17 $\frac{3}{4}$	34 46	3 57		{ D and Al- debaran.	
D — 12.	10 42 31		32 23 8	12 10 $\frac{1}{4}$	35 21 $\frac{3}{4}$ L.	6 40 $\frac{3}{4}$	34 53	4 57		{ D and Al- debaran.	
						East.					
♀ — 16.	18 33 35 $\frac{1}{2}$		118 29 55	23 52 $\frac{1}{2}$	18 0 $\frac{2}{3}$ U.	4 11 $\frac{3}{4}$	35 1	3 57		{ D and ☉.	
D — 19	14 55 54		56 19 49	35 7 $\frac{1}{4}$	28 36 $\frac{1}{4}$ L.	7 58 $\frac{3}{4}$	34 32	4		{ D and Al- debaran.	
	18 43 54		82 37 0	31 24 $\frac{2}{3}$	37 15 $\frac{3}{4}$ U.	8 2 $\frac{3}{4}$	34 38	3		{ D and ☉.	
	18 57 59		82 31 15	33 20	36 1 $\frac{1}{2}$ U.	7 56	34 38	5 59		{ D and ☉.	
	20 8 7		82 6 30	47 8 $\frac{1}{2}$	27 41 $\frac{1}{2}$ U.	8 5 $\frac{9}{10}$	34 38	4		{ D and ☉.	
♂ — 20.	17 26 57 $\frac{1}{2}$		70 16 54	15 6 $\frac{1}{6}$	41 32 $\frac{1}{2}$ L.	8 36 $\frac{1}{12}$	35 14	6 55		{ D and ☉.	
D Nov. 30.	2 30 55		73 54 32	29 5 $\frac{1}{2}$	56 32 $\frac{1}{2}$ L.	17 43 $\frac{1}{4}$	42 32	3 52		{ D and ☉.	
☿ Dec. 3	3 35 37		107 56 42	17 51 $\frac{1}{2}$	39 1 $\frac{1}{4}$ U.	18 35 $\frac{7}{8}$	44 46	4 46		{ D and ☉.	
♀ — 4.	2 21 42		118 26 24	31 2 $\frac{2}{3}$	21 25 $\frac{4}{5}$ U.	17 57 $\frac{1}{10}$	45 55	5 42		{ D and ☉.	
☿ — 17.	15 23 31		81 53 30	18 3 $\frac{1}{2}$	36 20 L.	24 52 $\frac{1}{8}$	55 5 $\frac{1}{2}$	3 30 $\frac{1}{2}$		{ D and ☉.	
	15 43 52		81 45 1	20 58	36 48 L.	24 46 $\frac{2}{3}$	55 5	5 30 $\frac{1}{2}$		{ D and ☉.	
	16 8 24		81 35 30	24 23 $\frac{3}{4}$	37 25 $\frac{1}{2}$ U.	24 59 $\frac{3}{4}$	55 5	4 30 $\frac{1}{2}$		{ D and ☉.	
1773.											
♂ Jan. 2.	3 52 12 $\frac{1}{2}$		109 10 2	23 21	6 51 $\frac{1}{4}$ U.	9 59 $\frac{1}{2}$	59 0	4 31 $\frac{1}{2}$		{ D and ☉.	
	4 59 1 $\frac{1}{2}$		109 32 30	15 1	19 14 $\frac{1}{3}$ U.	10 21	58 56	3 31		{ D and ☉.	
	5 12 38 $\frac{1}{2}$		109 37 53	13 25	19 27 U.	9 52 $\frac{3}{4}$	58 55	2 31		{ D and ☉.	
♀ — 13.	16 31 47		112 14 21	31 58	15 43 $\frac{3}{4}$ U.	39 45	64 3	4 32 $\frac{1}{2}$		{ D and ☉.	
	17 20 13 $\frac{1}{2}$		111 49 7	36 43 $\frac{1}{4}$	11 17 $\frac{1}{2}$ U.	39 36	64 1 $\frac{1}{2}$	4 32 $\frac{1}{2}$		{ D and ☉.	
	17 34 38		111 41 30	38 5 $\frac{1}{4}$	9 53 $\frac{3}{4}$ U.	39 40 $\frac{1}{4}$	64 1	6 32		{ D and ☉.	
☿ — 14	17 22 0 $\frac{1}{2}$		98 45 31	37 13 $\frac{3}{4}$	20 9 U.	40 3 $\frac{1}{4}$	63 36	4 34		{ D and ☉.	
	17 35 58		98 37 29	38 27 $\frac{1}{2}$	18 54 $\frac{2}{3}$ U.	39 32 $\frac{2}{3}$	63 36	5 34		{ D and ☉.	
	17 49 46		98 31 40	39 48	17 31 U.	39 31 $\frac{1}{4}$	63 36	3		{ D and ☉.	
	22 20 54		53 23 37	41 23 $\frac{1}{2}$	31 10 $\frac{1}{2}$ U.	51 58 $\frac{1}{4}$	56 20	2 33		{ D and ☉.	
☿ Feb. 4.	4 59 52		34 56 36	13 56	21 34 L.	60 23 $\frac{3}{4}$		4 42		{ D and Al- debaran.	
♂ — 6.	4 57 51		61 57 22	14 18	24 33 $\frac{3}{4}$ L.	62 29 $\frac{1}{4}$	48 20	4 43		{ D and Al- debaran.	
♀ — 12.	12 11 48		105 33 14	9 20 $\frac{1}{3}$	48 14 $\frac{1}{3}$ U.	71 34 $\frac{1}{4}$	51 0	6 38		{ D and ☉.	
	14 43 25		104 31 36	32 58 $\frac{1}{2}$	30 41 $\frac{3}{4}$ U.	71 51	51 1	4 38		{ D and ☉.	
♂ — 13.	16 18 59		90 34 25	46 7	24 42 U.	76 14 $\frac{5}{8}$	51 37	1		{ D and ☉.	
	16 39 17		90 24 26	47 50 $\frac{3}{4}$	21 41 $\frac{3}{4}$ U.	76 18 $\frac{5}{8}$	51 37	4 38		{ D and ☉.	
♀ — 17	15 3 28		40 1 23	41 46	52 14 $\frac{1}{2}$ U.	88 15 $\frac{1}{2}$	52 53	2 37		{ D and ☉.	
○ — 28.	18 9 8 $\frac{1}{2}$		74 40 22	29 32 $\frac{1}{2}$	20 57 $\frac{1}{2}$ L.	122 37 $\frac{1}{8}$	50 15	2		{ D and ☉.	
	18 32 6		74 47 57	26 5	22 8 $\frac{4}{5}$ L.	122 29 $\frac{1}{3}$	50 15	5 54		{ D and ☉.	
☿ March 4.	19 15 45		120 14 2	11 21 $\frac{1}{2}$	17 5 $\frac{1}{3}$ L.	134 29	44 32	4 51		{ D and ☉.	

ON BOARD THE ADVENTURE.

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1773.	Time by No. 1.		Distance D's L. from ☉ or *.	Altitude of the ☉'s L. L. or *.	Moon's Altitude.	Longitude East of Greenwich.	Latitude of the Ship S.	No. of Obs.	Thermom.	Objects.
	H	"								
4 March 4.	21	19 49	38 49 8 †	23 36 $\frac{2}{3}$	26 32 $\frac{1}{3}$ L.	134 33 $\frac{5}{8}$	44 20	3 51		{ D and Al- debaran.
	0	12 50 $\frac{1}{2}$	40 17 2 †	32 13 $\frac{1}{4}$	20 52 $\frac{3}{4}$ L.	134 57 $\frac{1}{2}$	44 18	4 50		{ D and Regulus.
☉ — 7.	21	12 22	37 37 18 †	17 27 $\frac{1}{4}$	24 9 $\frac{1}{2}$ L.	142 40 $\frac{1}{4}$	43 46	4 54		{ D and Pollux.
♂ — 9.	5	11 41	20 34 18 †	44 53 $\frac{1}{2}$	25 48 L.	146 47 $\frac{1}{2}$	43 44	4 52		{ D and Spica ♀.
♀ — 10.	21	7 9 $\frac{1}{2}$	44 31 04 †	24 8	11 36 $\frac{3}{4}$ L.	147 33 $\frac{9}{10}$	43 22	8 53		{ D and Regulus.
☉ — 14.	11	41 18 $\frac{1}{2}$	97 24 45 †	45 25 $\frac{5}{8}$	18 49 $\frac{1}{2}$ U.	148 2 $\frac{1}{10}$	43 23	3 56		{ D and ☉.
D — 15.	7	48 18	86 3 13 †	11 42 $\frac{3}{4}$	62 52 $\frac{1}{2}$ U.	148 37 $\frac{7}{8}$	43 33	6 53		{ D and ☉.
	9	33 55 $\frac{1}{2}$	85 27 7 †	29 45	49 44 $\frac{1}{2}$ U.	148 42 $\frac{1}{2}$	43 30	4 54		{ D and ☉.
♂ — 16.	9	26 46	72 49 0 †	29 7 $\frac{5}{8}$	58 45 $\frac{1}{2}$ U.	148 26 $\frac{1}{2}$	42 4	6 53		{ D and ☉.
♀ — 17.	9	27 22	60 25 18 †	29 42 $\frac{1}{10}$	63 35 $\frac{1}{10}$ U.	148 26 $\frac{7}{10}$	40 41	5 54		{ D and ☉.
☉ — 28.	14	38 11	53 34 30 †	31 33 $\frac{1}{2}$	31 55 $\frac{1}{4}$ U.	161 35 $\frac{3}{8}$	40 18	4 61		{ D and ☉.
	15	26 9 $\frac{1}{2}$	53 48 39 †	23 47 $\frac{1}{2}$	32 43 U.	161 39 $\frac{7}{8}$	40 18	6 61		{ D and ☉.
	18	42 16 $\frac{1}{2}$	48 8 9 †	21 12 $\frac{1}{2}$	16 8 $\frac{9}{10}$ U.	161 56	40 24	5 62		{ D and Pollux.
D — 29.	14	59 20	64 40 29 †	36 35 $\frac{1}{2}$	29 19 $\frac{1}{4}$ U.	163 29 $\frac{1}{2}$	40 42	4 62		{ D and ☉.
	15	36 15	64 50 15 †	20 20	30 42 U.	163 50 $\frac{1}{2}$	40 42	2 62		{ D and ☉.
	15	52 52	64 55 16 †	17 21 $\frac{2}{3}$	30 56 $\frac{1}{3}$ U.	163 27	40 42	3 63		{ D and ☉.
♂ — 30.	15	2 37	75 49 11 †	24 4	25 57 $\frac{1}{4}$ U.	165 27 $\frac{3}{4}$	41 17	4 64		{ D and ☉.
	15	31 1 $\frac{1}{2}$	75 58 0 †	19 11 $\frac{1}{2}$	27 55 U.	165 3 $\frac{2}{3}$	41 17	2 64		{ D and ☉.
	16	14 10	76 10 2 †	11 47 $\frac{1}{2}$	29 35 $\frac{1}{4}$ U.	165 10 $\frac{3}{5}$	41 17	4 63		{ D and ☉.
h April 3.	16	16 39	123 42 15	4 31 $\frac{3}{4}$	21 38 U.		40 30	4 63		{ D and ☉, back Obsf.
	17	44 25	71 43 30 †	18 5 $\frac{2}{3}$	31 54 $\frac{1}{2}$ L.	172 25 $\frac{1}{10}$	40 28	4 60		{ D and Al- debaran.
	21	10 12	60 40 10 †	48 15	33 15 $\frac{1}{2}$ L.	172 45 $\frac{9}{10}$	40 26	2 59		{ D and Spica ♀.
☉ — 4.	15	43 3	136 25 10	9 30 $\frac{1}{2}$	11 38 $\frac{2}{3}$ U.		41 21	6 63		{ D an ☉
	15	51 56	136 29 53	7 49	13 10 $\frac{2}{3}$ U.		41 21	5 63		{ by the
	16	0 50	136 33 45	6 17 $\frac{1}{3}$	14 39 $\frac{4}{5}$ U.		41 21	5 63		{ back Obsf.
	18	4 51	47 50 41 †	16 21 $\frac{3}{5}$	32 40 $\frac{2}{5}$ L.	174 9	40 25	5 63		{ D and Spica ♀.
	18	31 56	43 48 4 †	19 43 $\frac{1}{5}$	35 40 $\frac{2}{5}$ L.	173 52 $\frac{1}{4}$	40 25	5 61		{ D and Pollux.
♀ June 9.	6	32 58	115 20 36 †	8 0 $\frac{1}{2}$	26 55 $\frac{1}{2}$ U.	179 13 $\frac{1}{3}$	43 50	6 53		{ D and ☉.
	8	12 4 $\frac{1}{2}$	114 34 30 †	18 33	9 24 $\frac{1}{5}$ U.	179 7 $\frac{3}{8}$		5 54		{ D and ☉.
h — 12.	7	27 8	79 59 58 †	14 15 $\frac{5}{8}$	26 30 $\frac{1}{2}$ U.	183 57 $\frac{3}{4}$	46 17	6 51		{ D and ☉.
	8	11 11	79 44 48 †	17 38 $\frac{2}{3}$	19 58 $\frac{2}{3}$ U.	184 23 $\frac{1}{10}$	46 18	5 51 $\frac{1}{2}$		{ D and ☉.
h — 26.	8	57 56 $\frac{2}{3}$	67 58 52 †	23 16	13 42 U.	196 37 $\frac{1}{3}$	43 5 $\frac{1}{4}$	3 48		{ D and ☉.
	10	49 57	107 35 15 †	16 57 $\frac{1}{4}$	17 30 $\frac{1}{4}$ U.	199 2 $\frac{1}{2}$	42 52	4 52		{ D and ☉.
♀ July 2.	14	10 26	51 2 6 †	56 6	32 30 $\frac{1}{3}$ U.	203 42 $\frac{1}{4}$	43 1	3 48		{ D and Spica ♀.

1773.	Time by No. 1.	Distance D's L. from ☉'s or *.	Altitude of the ☉'s L. L. or *.	Moon's Altitude.	Longitude East of Greenwich.	Latitude of the Ship S.	No. of Obs.	Thermom.	Objects.
	H	° ' "	° ' "	° ' "	° ' "	° ' "			
July 5.	17 18 55 $\frac{1}{2}$	51 57 52 $\frac{1}{2}$	72 58 $\frac{3}{4}$	36 26 L.	207 52 $\frac{1}{2}$	42 55	246		☉ and Antares.
— 7.	18 18 3	79 45 52 $\frac{1}{2}$	67 44 $\frac{1}{2}$	25 38 $\frac{1}{2}$ L.	210 18 $\frac{9}{10}$	41 51	449		☉ and Antares.
— 9.	4 0 42	111 26 8 $\frac{1}{2}$	8 45 $\frac{1}{2}$	20 37 U.	215 28 $\frac{1}{10}$	43 28	255		☉ and ☉.
— 10.	4 34 39	111 14 58 $\frac{1}{2}$	13 7	14 35 $\frac{1}{2}$ U.	214 55	43 28	355		☉ and ☉.
— 11.	4 11 45	99 59 24 $\frac{1}{2}$	11 25 $\frac{3}{4}$	21 21 $\frac{3}{4}$ U.	217 8 $\frac{1}{4}$	43 32	546		☉ and ☉.
— 11.	3 56 33	88 56 41 $\frac{1}{2}$	10 51 $\frac{1}{2}$	25 56 $\frac{9}{10}$ U.	218 48	43 16	747 $\frac{1}{2}$		☉ and ☉.
— 12.	5 49 38	88 15 22 $\frac{1}{2}$	21 58	8 16 $\frac{1}{2}$ U.	219 17		448		☉ and ☉.
— 12.	3 24 43	78 6 18 $\frac{1}{2}$	7 26 $\frac{3}{4}$	30 52 $\frac{3}{4}$ U.	220 5	40 0	656		☉ and ☉.
— 25.	4 23 57 $\frac{1}{2}$	77 49 42 $\frac{1}{2}$	15 5	24 38 $\frac{1}{2}$ U.	220 11 $\frac{9}{10}$		656		☉ and ☉.
— 26.	9 51 36	64 49 35	23 36 $\frac{1}{2}$	57 39 $\frac{1}{2}$ U.	224 7	29 43	666		☉ and ☉.
— 26.	9 39 4	77 53 12 $\frac{1}{2}$	25 49 $\frac{1}{8}$	53 16 $\frac{1}{2}$ U.	225 16		666 $\frac{1}{2}$		☉ and ☉.
— 26.	9 49 5 $\frac{1}{2}$	77 56 40 $\frac{1}{2}$	24 13 $\frac{1}{2}$	55 9 $\frac{1}{2}$ U.	225 14 $\frac{1}{2}$		366 $\frac{1}{2}$		☉ and ☉.
— 27.	10 28 50	73 10 35 $\frac{1}{2}$	17 22 $\frac{1}{2}$	61 39 U.	225 10 $\frac{3}{4}$		366 $\frac{1}{2}$		☉ and ☉.
— 27.	8 25 54	90 39 0 $\frac{1}{2}$	36 20 $\frac{1}{2}$	30 2 $\frac{1}{2}$ U.	225 24 $\frac{1}{2}$	27 51	667		☉ and ☉.
— 27.	10 58 46 $\frac{1}{2}$	91 29 5 $\frac{1}{2}$	12 5	61 40 $\frac{1}{2}$ U.	225 12 $\frac{3}{8}$		267		☉ and ☉.
— 27.	13 11 31 $\frac{2}{3}$	17 7 0 $\frac{1}{2}$	60 8:	71 19 L.	225 13 $\frac{1}{2}$		365		☉ and Spica ♉.
— 28.	13 34 52 $\frac{2}{3}$	81 1 13 $\frac{1}{2}$	17 22 $\frac{3}{4}$	68 39 $\frac{3}{4}$ L.	225 5 $\frac{1}{4}$		365		☉ and α Aquilæ.
— 28.	9 59 38	104 41 40	23 21 $\frac{1}{8}$	39 16 $\frac{3}{8}$ U.	224 28 $\frac{1}{4}$	27 42	667 $\frac{1}{2}$		☉ and ☉.
— 29.	10 26 16	118 19 22 $\frac{1}{2}$	19 14 $\frac{3}{4}$	33 37 $\frac{1}{4}$ U.	223 54	27 20	768		☉ and ☉.
— 30.	10 23 17	131 43 7 $\frac{1}{2}$	19 11 $\frac{1}{2}$	22 10 $\frac{1}{2}$ U.	225 11 $\frac{3}{4}$	26 58	469		☉ and ☉, back Obs.
— 31.	10 56 43 $\frac{1}{2}$	145 18 27 $\frac{1}{2}$	12 58 $\frac{3}{8}$	17 17 $\frac{1}{8}$ U.	225 25 $\frac{5}{8}$		867 $\frac{1}{2}$		☉ and ☉, ditto.
Aug. 2.	16 36 9	59 13 5 $\frac{1}{2}$	54 18 $\frac{3}{4}$	66 9 $\frac{1}{2}$ L.	226 58 $\frac{5}{8}$		465		☉ and Antares.
— 3.	16 37 21 $\frac{1}{2}$	73 27 35 $\frac{1}{2}$	52 24	54 21 $\frac{1}{2}$ L.	227 13 $\frac{1}{2}$		467		☉ and Antares.
— 4.	1 18 59	155 13 7 $\frac{1}{2}$	5 41 $\frac{3}{4}$	10 31 $\frac{7}{8}$ L.	227 40 $\frac{1}{2}$	20 49	876		☉ and ☉, back Obs.
— 8.	3 30 40 $\frac{1}{2}$	108 19 24 $\frac{1}{2}$	31 52 $\frac{1}{8}$	20 57 $\frac{5}{8}$ U.	222 53 $\frac{1}{10}$	17 44	675 $\frac{1}{2}$		☉ and ☉.
— 9.	3 31 57 $\frac{1}{2}$	97 17 21 $\frac{1}{2}$	30 57	30 40 U.	220 52	17 24	775 $\frac{1}{2}$		☉ and ☉.
— 11.	4 20 43	97 0 52 $\frac{1}{2}$	40 18 $\frac{2}{3}$	20 15 U.	220 54 $\frac{1}{10}$	17 24	677		☉ and ☉.
— 11.	2 59 17	75 23 30 $\frac{1}{2}$	21 43 $\frac{3}{4}$	51 28 $\frac{3}{4}$ U.	216 30		478		☉ and ☉.
— 12.	3 8 21	75 21 51 $\frac{1}{2}$	23 38 $\frac{2}{3}$	50 20 $\frac{1}{8}$ U.	216 35		578		☉ and ☉.
— 12.	2 26 19 $\frac{1}{3}$	64 24 38 $\frac{1}{2}$	13 38	54 11 L.	215 29 $\frac{1}{2}$		379		☉ and ☉.
— 13.	2 48 20 $\frac{1}{2}$	53 0 24	17 26 $\frac{1}{2}$	52 18 $\frac{3}{4}$ L.	213 19 $\frac{3}{4}$	17 17	979 $\frac{1}{2}$		☉ and ☉.
— 14.	3 44 38	52 47 13	29 31	53 28 L.	213 13 $\frac{1}{2}$	17 17	980		☉ and ☉.
— 25.	2 25 26	41 34 21:	10 54 $\frac{2}{3}$	43 24 $\frac{1}{2}$ L.	211 46 $\frac{9}{10}$	17 41	679		☉ and ☉.
Sept. 7.	11 6 13	89 30 25	25 53 $\frac{1}{2}$	62 42 $\frac{1}{2}$ U.	210 38 $\frac{2}{3}$	17 27	8		☉ and ☉.
— 8.	2 8 43	105 47 4	12 38 $\frac{2}{3}$	43 29 U.	208 35 $\frac{4}{5}$		1077 $\frac{1}{2}$		☉ and ☉.
— 9.	3 44 37	94 23 59 $\frac{1}{2}$		33 1 $\frac{1}{2}$ U.	208 42 $\frac{1}{10}$		678		☉ and ☉.
— 11.	3 7 6	83 29 34 $\frac{1}{2}$	27 29 $\frac{1}{2}$	46 49 $\frac{1}{2}$ U.	208 33 $\frac{3}{8}$		679		☉ and ☉.
— 11.	4 0 1	60 26 57 $\frac{1}{2}$	40 20	52 48 $\frac{2}{3}$ U.	208 38 $\frac{1}{2}$		676		☉ and ☉.

In Ohama
reno har-
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16 45 $\frac{1}{2}$ S.

ON BOARD THE ADVENTURE.

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1773.	Time by No. 1.	Distance D's L. from ☉'s or *.	Altitude of the ☉'s L. L. or *.	Moon's Altitude.	Longitude East of Greenwich.	Latitude of the Ship S.	No. of Obs.	Thermom.	Objects.
	H	° ' "	° ' "	° ' "	° ' "	° ' "			
♂ — 21.	9 4 44	58 53 11	56 7 $\frac{1}{2}$	61 39 U.	204 18	18 25	6 76		☽ and ☉.
	12 10 36	56 53 26	14 13 $\frac{1}{4}$	74 35 U.	204 21 $\frac{1}{2}$	18 26	4 76 $\frac{1}{2}$		☽ and ☉.
♀ — 24.	10 25 20 $\frac{1}{2}$	99 31 48	42 2 $\frac{1}{10}$	37 30 U.	199 40		6 74 $\frac{1}{2}$		☽ and ☉.
	10 37 55	99 34 51	39 17 $\frac{3}{4}$	40 21 $\frac{1}{2}$ U.	199 38 $\frac{1}{2}$		5 72 $\frac{1}{2}$		☽ and ☉.
♂ — 25.	9 45 53 $\frac{1}{2}$	112 0 10	52 5 $\frac{1}{2}$	14 25 $\frac{3}{4}$ U.	197 24 $\frac{1}{10}$	19 55 $\frac{2}{3}$	5 74		☽ and ☉.
☽ Oct. 4.	3 37 39	135 18 54	†	14 30 $\frac{1}{8}$ U.	184 51 $\frac{1}{4}$	At Ton- gatabu. Lat. 21° 4 $\frac{1}{2}$.	7 66 $\frac{1}{2}$		☽ and ☉.
♀ — 6.	5 25 20	112 53 41	†	9 52 $\frac{3}{4}$ U.	185 14 $\frac{1}{8}$		10 69 $\frac{1}{2}$		☽ and ☉.
♂ — 7.	3 14 15	102 42 37	16 42	41 29 $\frac{1}{8}$ U.	185 5 $\frac{1}{4}$	21 57 $\frac{1}{2}$	6 71 $\frac{1}{2}$		☽ and ☉.
♀ — 8.	5 51 17	90 39 15	53 8 $\frac{1}{4}$	23 3 $\frac{1}{4}$ U.	185 20		4 70 $\frac{1}{2}$		☽ and ☉.
♂ — 9.	3 9 16	79 57 51	16 6 $\frac{1}{10}$	50 46 $\frac{4}{5}$ U.	184 26 $\frac{2}{3}$	22 37	10 69 $\frac{1}{2}$		☽ and ☉.
	5 22 46	79 21 3	46 29 $\frac{1}{2}$	37 56 $\frac{1}{2}$ U.	184 46	22 40	6 70		☽ and ☉.
☉ — 10.	5 35 42	67 28 18	48 10 $\frac{4}{5}$	45 0 U.	183 7 $\frac{1}{8}$		10 67 $\frac{1}{2}$		☽ and ☉.
☽ — 11.	3 43 21 $\frac{1}{2}$	55 46 34	22 23 $\frac{1}{8}$	50 16 $\frac{1}{8}$ U.	182 2 $\frac{1}{4}$		6 67 $\frac{1}{2}$		☽ and ☉.
	6 2 30	55 4 22	52 55 $\frac{1}{2}$	49 27 $\frac{3}{4}$ U.	181 45 $\frac{1}{3}$		6 68		☽ and ☉.
♀ — 20.	8 57 51	55 9 33	60 56 $\frac{1}{8}$	44 30 $\frac{2}{3}$ U.	179 39 $\frac{5}{8}$	37 47 $\frac{1}{2}$	6 59 $\frac{1}{2}$		☽ and ☉.
	11 58 23 $\frac{2}{3}$	56 19 40	39 43 $\frac{2}{3}$	69 52 $\frac{2}{3}$ U.	179 21	38 0	6 59		☽ and ☉.
♂ — 21.	10 56 27 $\frac{1}{2}$	69 30 22	45 30 $\frac{1}{2}$	53 49 $\frac{2}{3}$ U.	178 13 $\frac{2}{3}$	39 10	6 60		☽ and ☉.
	13 41 34 $\frac{1}{2}$	70 23 40	14 57 $\frac{1}{3}$	67 29 $\frac{2}{3}$ L.	177 59 $\frac{5}{8}$	39 17	4 59		☽ and ☉.
At the time of these last Observations, Table-Head in New Zealand bore due North.									
♀ — 22.	11 33 49 $\frac{1}{2}$	82 54 40	39 38	48 17 $\frac{1}{3}$ U.	176 44 $\frac{9}{10}$	40 30	3 57		☽ and ☉.
These were taken between Cape Turnagain and Black-Head in New Zealand.									
	12 43 5	83 19 39	26 58 $\frac{5}{8}$	58 59 U.	176 17 $\frac{9}{10}$	40 30	6 58		☽ and ☉.
♂ — 23.	10 53 19 $\frac{1}{2}$	95 23 10	46 56	29 53 $\frac{1}{3}$ U.	175 53 $\frac{1}{4}$	40 51	6 55 $\frac{1}{2}$		☽ and ☉.
	13 18 26 $\frac{3}{4}$	96 18 44	20 54 $\frac{1}{2}$	54 16 $\frac{1}{2}$ U.	176 6 $\frac{1}{2}$	40 53 $\frac{1}{2}$	6 55		☽ and ☉.
☉ — 24.	11 12 5	107 52 11	43 38 $\frac{1}{8}$	21 52 U.	175 33 $\frac{2}{3}$	41 30	6 60		☽ and ☉.
	13 4 43 $\frac{2}{3}$	108 37 48	23 34	41 24 $\frac{1}{8}$ U.	175 22 $\frac{1}{4}$	41 32	6 58		☽ and ☉.
♂ Nov. 9.	2 35 55	63 33 36	14 59 $\frac{5}{8}$	41 14 U.	178 37 $\frac{1}{4}$	In Tolaga Bay. Lat. 38° 21 $\frac{1}{2}$.	6 57 $\frac{1}{2}$		☽ and ☉.
♀ — 10.	2 8 2	50 48 22	10 1 $\frac{9}{10}$	34 12 U.	178 30 $\frac{1}{4}$		12 56		☽ and ☉.
♂ — 18.	12 14 41	51 14 26	33 54 $\frac{2}{3}$	66 6 $\frac{5}{8}$ L.	177 59 $\frac{1}{4}$	40 02	6 69		☽ and ☉.
♂ — 20.	14 15 55	78 7 2	11 55	59 37 $\frac{5}{8}$ L.	176 14 $\frac{1}{4}$		6 54		☽ and ☉.
☽ — 22.	12 49 15	102 3 52	28 3 $\frac{3}{4}$	42 13 U.	176 8 $\frac{9}{10}$	40 58	6 56		☽ and ☉.
Cape Turnagain N. N. W. by Compaſs diſtant 7 or 8 leagues.									
	14 14 9	102 30 20	12 27 $\frac{1}{8}$	51 41 $\frac{1}{3}$ U.	176 11	40 57	6 56		☽ and ☉.
♂ — 23.	11 39 10 $\frac{1}{3}$	113 14 48	41 29 $\frac{2}{3}$	20 32 $\frac{1}{3}$ U.	175 51 $\frac{1}{4}$	40 57	6 61 $\frac{1}{2}$		☽ and ☉.
♀ Dec. 22.	14 16 47	105 55 28	13 50 $\frac{1}{3}$	41 38 $\frac{1}{8}$ U.	174 31 $\frac{2}{3}$	41 20	6 65		☽ and ☉.
♂ — 23.	12 43 30 $\frac{1}{3}$	116 25 53	30 22 $\frac{1}{8}$	23 48 U.	175 16 $\frac{1}{2}$	42 29	6 65 $\frac{1}{2}$		☽ and ☉.
1774.									
♂ Jan. 4.	2 1 4	102 9 18	27 22 $\frac{2}{3}$	29 38 U.	192 11 $\frac{1}{2}$	55 15 $\frac{1}{2}$	6 49		☽ and ☉.
	2 53 38	101 47 30	34 55	24 49 $\frac{1}{2}$ U.	192 5	55 17	6 48		☽ and ☉.
♂ — 8.	2 5 1	63 22 30	33 26 $\frac{1}{8}$	44 53 $\frac{1}{4}$ U.	202 26	57 8 $\frac{1}{3}$	6 36		☽ and ☉.
♀ — 19.	6 14 29	82 20 10	41 1 $\frac{1}{2}$	17 12 $\frac{1}{2}$ U.	241 37 $\frac{3}{4}$	59 26	6 40		☽ and ☉.
	6 27 37	82 25 30	39 34 $\frac{1}{2}$	18 13 $\frac{1}{8}$ U.	241 39	59 27	3 40		☽ and ☉.
	7 29 59	82 48 58	32 10 $\frac{2}{3}$	21 53 $\frac{1}{8}$ U.	241 52 $\frac{1}{8}$	59 28	6 39 $\frac{1}{2}$		☽ and ☉.
♀ — 21.	9 51 23 $\frac{1}{2}$	105 48 38	11 26	16 21 $\frac{1}{2}$ U.	247 32 $\frac{1}{2}$		2 39 $\frac{1}{2}$		☽ and ☉.

1774.	Time by No. 1.	Distance D's L. from ☉'s or *.	Altitude of the ☉'s L. L. or *.	Moon's Altitude.	Longitude East of Greenwich.	Latitude of the Ship S.	No. of Obs.	Thermom.	Objects.
	H								
☉ Jan. 30.	12 36 17	41 30 37	21 43 $\frac{1}{2}$	17 51 $\frac{1}{2}$ L.	286 19 $\frac{3}{4}$	61 28	4 41 $\frac{1}{2}$		☽ and Spica ♏.
☿ Feb. 2	17 46 9	111 40 8	16 55 $\frac{2}{3}$	30 41 U.	301 13	60 39	6 41		☽ and ☉.
	19 34 28	110 51 58	30 18 $\frac{1}{2}$	20 49 U.	301 49 $\frac{5}{8}$	60 38	6 41 $\frac{1}{2}$		☽ and ☉.
♂ — 22.	1 12 56 $\frac{2}{3}$	125 7 25 †	14 41	8 17 U.	349 56 $\frac{2}{3}$	53 14	6 39		☽ and ☉: back Obs.
♀ — 25.	3 9 41	70 11 33 †	15 46 $\frac{1}{3}$	13 51 $\frac{2}{3}$ L.	358 34 $\frac{1}{3}$	53 25	3 38		☽ and Al- debaran.
	4 41 9	63 4 38 †	15 3	20 55 L.	359 0 $\frac{3}{5}$		3 38		☽ and Spica ♏.
♂ — 26.	Having completed 360° of Longitude, and of course gained a day, it was here rec- tified by repeating this.								
☿ March 2.	12 38 27	118 44 33	8 44 $\frac{1}{8}$	38 29 $\frac{5}{8}$ U.	11 42 $\frac{1}{8}$	53 44	3 34		☽ and ☉.
	14 20 38 $\frac{1}{3}$	118 0 15	23 30 $\frac{5}{8}$	25 45 $\frac{2}{3}$ U.	11 29 $\frac{1}{3}$	53 38	6 34		☽ and ☉.
☉ — 6.	17 28 57	63 32 58 †	46 2 $\frac{1}{3}$	34 31 $\frac{1}{2}$ U.	13 46 $\frac{3}{4}$	48 15	6 40		☽ and ☉.
☽ — 7.	18 47 18	62 54 28 †	45 6 $\frac{5}{8}$	22 2 U.	13 58 $\frac{1}{2}$	48 15	6 40		☽ and ☉.
	12 55 47 $\frac{1}{2}$	52 5 50	13 24	53 7 $\frac{1}{4}$ L.	13 56 $\frac{3}{5}$	47 53	8 38		☽ and ☉.
♂ — 15.	22 26 0 $\frac{2}{3}$	37 30 58 †	15 42 $\frac{1}{2}$	33 35 L.	17 10 $\frac{1}{2}$		4 69 $\frac{1}{2}$		☽ and ☉.
	0 45 0 $\frac{1}{2}$	32 49 16 †	28 20 $\frac{2}{3}$	10 0 $\frac{1}{2}$ L.	16 39		6 68		☽ and Al- debaran.
♀ — 16.	19 55 52 $\frac{1}{2}$	48 12 26	43 36	41 33 $\frac{1}{2}$ U.	16 56	34 35	6 68 $\frac{1}{2}$		☽ and ☉.
♂ — 17.	20 49 32	59 37 50	33 5	39 54 $\frac{2}{3}$ U.	17 59 $\frac{1}{2}$	The Table Mountain E. by S. 6 leagues.			☽ and ☉.
	22 11 10	59 59 14	16 54 $\frac{1}{2}$	38 56 U.	17 48 $\frac{3}{5}$	34 10	6 70		☽ and ☉.
♀ — 18.	21 52 56 $\frac{1}{2}$	70 54 59	20 0	38 46 U.	18 22	In the Mouth of Table Bay.			☽ and ☉.
☿ April 20.	20 27 25	106 29 56	22 16 $\frac{1}{3}$	18 50 $\frac{5}{8}$ U.	15 58	32 28	6 64		☽ and ☉.
♀ — 22.	23 29 33	36 11 21 †	21 22 $\frac{2}{3}$	38 32 $\frac{5}{8}$ U.	13 17	30 0	6 63		☽ and Spica ♏.
	23 48 13	54 47 32 †	28 47 $\frac{1}{8}$	41 39 $\frac{1}{2}$ U.	13 29 $\frac{1}{8}$		6 63		☽ and Pollux.
♀ — 29.	13 13 29 $\frac{1}{2}$	125 32 28 †	17 8 $\frac{1}{3}$	34 35 U.	3 28 $\frac{7}{10}$		6 69 $\frac{1}{2}$		☽ and ☉: back Obs.
	15 7 52	124 36 45 †	39 25 $\frac{5}{8}$	9 22 $\frac{2}{3}$ U.	3 45 $\frac{7}{10}$		6 71 $\frac{1}{2}$		☽ and ☉.
♂ — 30.	12 59 46 $\frac{1}{2}$	112 4 0 $\frac{1}{2}$ †	14 4	51 9 $\frac{5}{8}$ U.	2 51 $\frac{1}{8}$		6 69 $\frac{1}{2}$		☽ and ☉.
	14 23 20 $\frac{1}{2}$	111 30 5 †	31 17 $\frac{1}{3}$	32 8 $\frac{3}{5}$ U.	2 42		5 74		☽ and ☉.
☉ May 1.	14 39 47	98 6 52	34 13 $\frac{2}{3}$	41 4 U.	2 6 $\frac{1}{2}$	20 30	6 70 $\frac{1}{2}$		☽ and ☉.
	15 36 7	97 37 2	43 59	28 13 $\frac{1}{2}$ U.	1 58	20 29	4 71 $\frac{1}{2}$		☽ and ☉.
☽ — 2.	12 56 46	85 40 34	13 7 $\frac{2}{3}$	76 5 $\frac{2}{3}$ U.	1 19 $\frac{9}{10}$	19 38	6 69 $\frac{1}{2}$		☽ and ☉.
♂ — 3.	12 33 23	73 1 58 †	8 8 $\frac{5}{8}$	78 45 $\frac{5}{8}$ L.	0 53 $\frac{2}{3}$		6 70		☽ and ☉.
				West.					
♂ — 5.	19 25 52	58 17 45 †	45 20 $\frac{2}{3}$	8 20 U.	0 14		3 71 $\frac{1}{2}$		☽ and ☉.
	16 21 7	47 28 30 †	50 18 $\frac{5}{8}$	60 13 $\frac{5}{8}$ U.	1 10		6 72 $\frac{1}{2}$		☽ and ☉.
♀ — 13.	17 53 13	42 55 27 †	62 32 $\frac{5}{8}$	32 54 $\frac{1}{3}$ U.	11 58 $\frac{1}{4}$	7 59	6 75		☽ and ☉.
☉ — 15.	20 59 2	54 43 19 †	43 19 $\frac{2}{3}$	59 30 U.	14 32	6 25	6 81 $\frac{1}{2}$		☽ and ☉.
	23 27 17	66 22 5	11 58	68 8 L.	16 4	4 55	2 82 $\frac{1}{2}$		☽ and ☉.

ON BOARD THE ADVENTURE.

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1774.	Time by No. 1.			Distance D's L. from ☉'s or *.			Altitude of the ☉'s L. L. or *.		Moon's Altitude.	Longitude West of Greenwich.	Latitude of the Ship S.	No. of Obs.	Thermom.	Objects.
	H	"	"	°	'	"	°	'						
♂ May 17.	23	24	26	77	40	39	14	13	70 40 U.	17 29½	3 40	6	79½	☉ and ☉.
♂ — 18.	23	14	36	89	12	18	18	4½	63 5½ U.	19 19¼	2 21	6	80½	☉ and ☉.
♂ — 19.	23	20	11	101	5	55	17	58½	54 42 U.	20 3½	0 43	6	80½	☉ and ☉.
♀ — 20.	21	10	19	113	17	2	21	1½	41 1½ U.	20 38¾	0 34	6	80	☉ and ☉.
	1	59	17	26	32	28	57	28½	82 19 U.	20 34½	0 49	3	78½	☉ and Spica ♉.
♂ — 26.	6	26	6	39	46	5	34	37	54 10 L.	24 35¼	6 2	4	76	☉ and α Aquilæ.
	6	38	42	65	13	7	43	18¼	56 19¾ L.	24 28¼		4	76	☉ and Spica ♉.
♂ — 28.	10	38	17½	51	27	27	22	35½	65 2½ L.	25 20¾	6 34	5	75	☉ and Antares.
	11	5	9	53	43	0	58	0¾	63 16 U.	25 9¾		5	75	☉ and α Pegasi.
The apparent time of this last Observation was got from the altitudes of Antares.														
♂ — 31.	14	53	39	89	10	10	33	59¼	56 22¾ U.	24 56	6 56	4	79	☉ and ☉.
	16	3	51	88	45	37	49	59	40 11½ U.	25 3½	6 56	6	80	☉ and ☉.
♂ June 1.	13	31	7	77	14	20	15	30	79 44½ L.	25 18½	7 5	6	79½	☉ and ☉.
♂ — 2.	15	8	24	64	51	40	37	13¼	77 25½ U.	25 45	7 11	4	82	☉ and ☉.
	16	2	23	64	36	20	49	22½	65 3½ U.	25 54	7 11	6	82	☉ and ☉.
♀ — 3.	14	44	25	53	16	52	31	28	83 36 L.	26 32½	7 36	2	80	☉ and ☉.
☉ — 12.	21	37	27	37	13	7	54	7	88 5½ U.	34 52½	16 34	4	75	☉ and ☉.
	2	36	31¼	26	21	32	17	29½	26 2½ L.	35 3¾		6	74½	☉ and Regulus.
♂ — 13.	0	11	23½	48	59	16	19	58½	66 57½ L.	35 53		6	75	☉ and ☉.
	2	38	1	67	48	45	61	36½	32 45½	35 33¾		6	74½	☉ and Spica ♉.
♂ — 14.	0	16	28½	60	20	47	19	20¼	74 8½	36 24¾	19 29	4	75	☉ and ☉.
	2	44	32½	55	30	11	60	17¾	40 49½ L.	36 17¼		5	75	☉ and Spica ♉.
♂ — 15.	21	25	59	71	8	5	58	38½	49 45½ U.	36 43½	21 8½	6	75½	☉ and ☉.
♂ — 16.	23	15	2½	83	31	44	34	42¾	59 54¾ U.	37 36½	22 33	5	77	☉ and ☉.
	3	24	6	30	10	7½	57	10½	56 3½ U.	37 35		6	76	☉ and Spica ♉.
♀ — 17.	22	58	34½	95	38	31	39	16¾	43 46½ U.	38 39½		6	79	☉ and ☉.
	3	12	47	17	3	11	15	18¾	57 37¾ L.	38 18		6	77	☉ and Spica ♉.
	3	55	21	37	28	40	26	20	50 19½ L.	38 21		5	77	☉ and Regulus.
	4	17	48½	62	27	22	35	32½	45 58½ L.	38 33¾		6	77	☉ and Antares.
♂ — 18.	0	56	45½	108	54	43	14	0¾	52 9½ U.	39 15¾	25 27	6	77	☉ and ☉.
	3	45	42	49	11	06	31	13¾	54 49¾ L.	39 21¼		5	76	☉ and Antares.

1774.	Time by No. 1.		Distance D's L. from ☉'s or *.	Altitude of the ☉'s L. L. or *.	Moon's Altitude.	Longitude West of Greenwich.	Latitude of the Ship S.	No. of Obs.	Thermom.	Objects.
	H	"								
☉ June 19.	22	38 44	120 58 48	44 14	13 46 U.	39 18½	26 44	6	77½	☉ and ☉.
	5	6 29	34 56 49 †	36 28	45 56½ L.	39 10½	27 6	5	75½	☉ and Antares.
☽ — 20.	0	24 17	135 11 29	21 21½	21 18 U.	38 49¾	28 11	6	77	☉ and ☉: back Obs.
☽ — 21.	0	55 32	149 13 3	15 1½	13 57½ U.	39 19	29 40	6	76	☉ and ☉: back Obs.
	5	29 35	58 48 48 †	38 8½	43 8½ L.	39 30		3	74½	☉ and α Aquilæ.
	5	48 26	42 6 26 †	28 16½	42 49½ L.	39 35¾		3	74½	☉ and Spica ♏.
☽ — 23.	5	7 15	72 28 8 †	30 55½	28 23½ L.	40 36¾		4	74	☉ and Spica ♏.
☽ — 27.	13	32 1	119 43 52 †	18 53½	32 48 U.	40 10¼	37 51½	6	71	☉ and ☉.
	13	49 0	119 37 3	22 0½	30 15½ U.	40 17¾	37 51½	6	71	☉ and ☉.
☽ — 28.	12	51 31	107 12 40	12 6½	44 47½ U.	39 47¼	38 31	6	72	☉ and ☉.
	13	10 27	107 6 33	15 36½	43 26 U.	39 50½	38 31	6	72	☉ and ☉.
☽ — 29.	14	13 2	94 27 12	28 26½	44 59½ U.	39 17¾	39 3½	6	73	☉ and ☉.
	14	43 44	94 16 48	34 22½	41 15 U.	39 12½	39 4	6	73	☉ and ☉.
☽ — 30.	16	4 40	81 55 35	51 22½	37 28½ U.	37 34	39 57	6	73	☉ and ☉.
☽ July 2.	18	10 52½	58 23 22½ †	70 32½	33 55¾ U.	34 18¾		4	72	☉ and ☉.
☉ — 3.	13	43 11	48 39 58	29 9	56 28½ U.	33 0½	42 32	6	70	☉ and ☉.
☽ — 14.	21	5 4½	65 28 23	26 31½		1 10½	Spithead.	6	56	☉ and ☉.

* * It must here be observed, that all altitudes are put down as they were observed with Hadley's Sextant, from the ship's deck, and consequently are to be corrected for the semi-diameter of the object, the refraction, and dip of the horizon, which, on board the Adventure, was about 3' 50". The lower limb of the Sun was always observed; but as this could not be the case with respect to the Moon, I have distinguished these Observations, where the lower limb was observed by the letter L, and those where the upper limb was observed by the letter U. Where the character † occurs in the column of distances, the apparent time at the ship was got from the altitudes of the Sun taken next immediately preceding the distances, and of course the longitude put down is the longitude of the ship at the time when those altitudes were taken. The character ‡ signifies that the apparent time at the ship was got from the altitudes of the Sun next immediately following: Where neither of these are found, the time was obtained from the altitudes of the Sun or Star taken with the distances.

A Z I M U T H S
O F T H E
S U N ' s C E N T E R ,

Taken with an A Z I M U T H C O M P A S S ,

T O G E T H E R W I T H

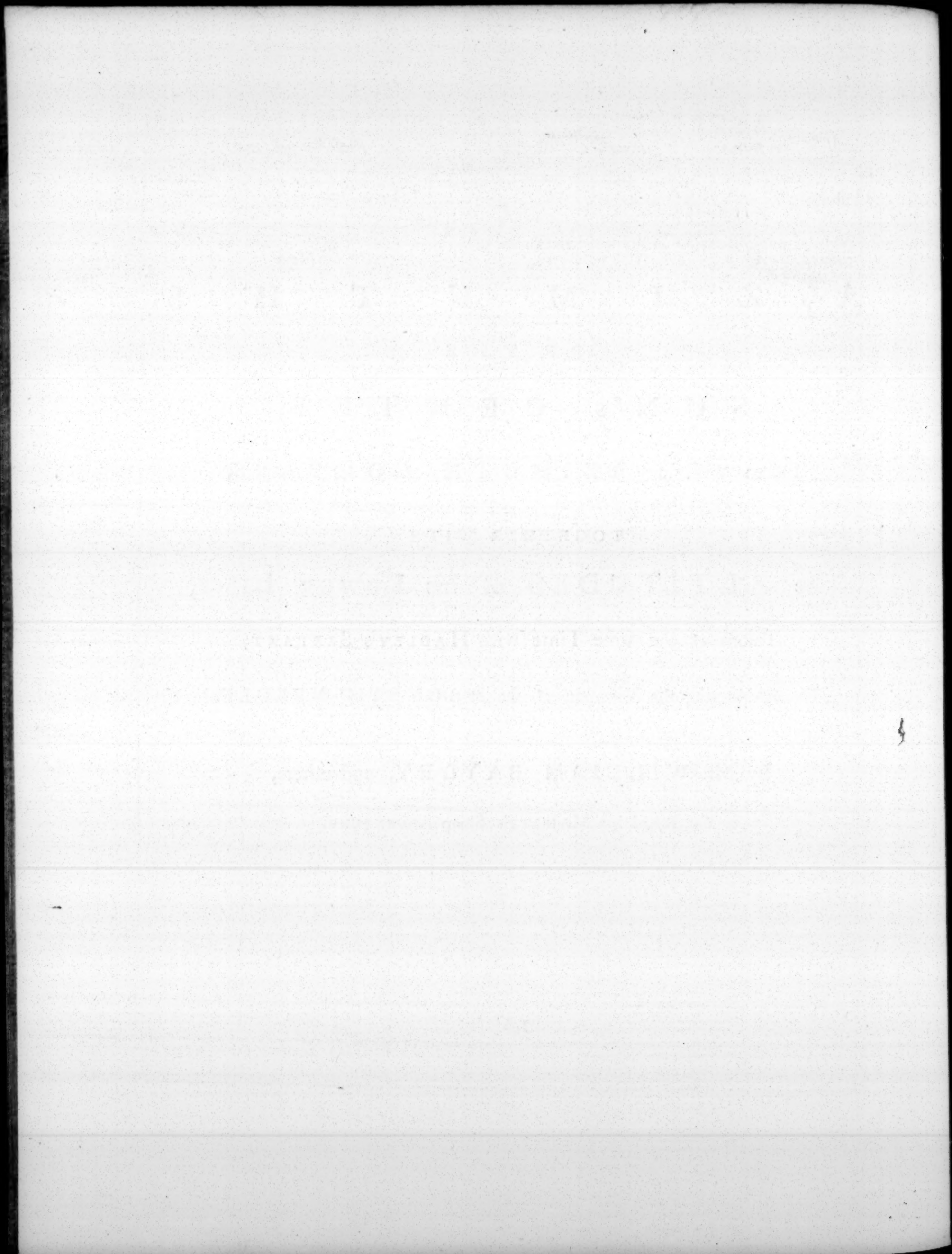
The A L T I T U D E S of his L O W E R L I M B ,

Taken at the same Time with H A D L E Y ' s S E X T A N T ,

For determining the Variation of the M A G N E T I C N E E D L E .

By Mr. W I L L I A M B A Y L E Y , and others,

On Board his M A J E S T Y ' s Sloop A D V E N T U R E .



ASTRONOMICAL OBSERVATIONS.

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1772.	Altitude of the Sun's L. L.	Magnetic Azimuth of the ☉'s Center.	Vari- ation West.	No. of Obs.	Latitude North.	Longitude West.	Observers.	Remarks.
h July 18.	13 56 $\frac{1}{2}$	N. 51 34 W.	22 21	3	46 33	7 50		
u — 23.	18 46 $\frac{2}{3}$	S. 77 41 $\frac{2}{3}$ E.	22 14	3	40 43	11 15		
♀ — 24.	10 22 $\frac{1}{2}$	N. 45 23 W.	24 15	1	39 30	11 52		
D Aug. 3.	13 51 $\frac{1}{2}$	N. 58 17 $\frac{1}{2}$ W.	19 33	4	29 14	17 30		
♂ — 4.	Amplit.	N. 37 45 W.	18 20	2	28 28	18 5		
♀ — 5.	11 2 $\frac{2}{3}$	N. 59 58 $\frac{2}{3}$ W.	16 45	3	27 28	18 30		
u — 6.	12 46	N. 91 47 $\frac{1}{2}$ E.	14 9	4	24 42	19 20		
♀ — 7.	8 21 $\frac{1}{3}$	N. 62 20 W.	13 42	3	23 41	19 35		
h — 8.	Amplit.	N. 34 0 W.	16 52 $\frac{1}{2}$	1	21 48	20 10		
	18 40 $\frac{1}{3}$	N. 92 45 E.	12 58	3	20 42	20 40		
○ — 9.	16 27 $\frac{1}{3}$	N. 62 46 $\frac{2}{3}$ W.	16 16	3	20 0	21 0		
♂ — 18.	18 46 $\frac{1}{2}$	N. 69 5 W.	9 11 $\frac{1}{2}$	2	12 48	20 45		
♀ — 19.	15 29	S. 88 32 $\frac{1}{2}$ E.	9 16	2	10 50	19 40		
D — 24.	13 38	N. 68 41 $\frac{2}{3}$ W.	12 2	3	6 20	14 30		
u — 27.	26 34 $\frac{2}{3}$	N. 69 6 $\frac{2}{3}$ W.	12 10	3	4 9	10 46		
♀ — 28.	13 6 $\frac{3}{4}$	S. 82 12 $\frac{1}{2}$ E.	16 29	4	3 20	8 39		
h — 29.	9 47 $\frac{1}{3}$	N. 96 33 $\frac{1}{3}$ E.	14 50	3	2 47	6 55		
D — 31.	17 13 $\frac{2}{3}$	N. 98 7 $\frac{1}{2}$ E.	16 24	2	2 4	5 40	Mr. Fannin.	
♂ Sept. 1.	16 52 $\frac{2}{3}$	N. 95 20 E.	12 48	3	1 29	6 22		
u — 3.	14 39 $\frac{1}{4}$	N. 97 7 $\frac{1}{2}$ E.	14 8	4	0 49	9 20		
♀ — 4.	19 37	N. 70 52 $\frac{1}{2}$ W.	12 10	4	0 50	9 36		
h — 5.	13 26	N. 69 6 $\frac{2}{3}$ W.	14 29	3	0 57	9 52		
	Amplit.	N. 69 0 W.	14 32	1	0 56	9 45		
	19 1	N. 99 25 E.	15 47	3	0 40	9 20		
○ — 6.	13 29 $\frac{2}{3}$	N. 70 55 E.	13 0	3	0 31	9 17		
					South.			
D — 7.	17 45	S. 80 50 E.	14 56	3	0 10	9 35		
♂ — 8.	13 19	S. 81 25 E.	14 1	5	0 36	10 27		
♀ — 9.	17 30	S. 81 39 E.	13 51	4	1 40	11 5		
u — 10.	14 58	S. 82 15 E.	13 1	2	2 46	11 20		
h — 12.	13 20 $\frac{1}{3}$	N. 75 33 $\frac{1}{3}$ W.	9 27	3	4 22	13 58		
D — 14.	14 47	N. 73 27 $\frac{1}{2}$ W.	11 33	2	6 43	14 37		
	Amplit.	N. 76 0 W.	10 56	1	6 43	14 37		
♀ — 16.	11 14	N. 75 45 W.	7 55	1	9 54	15 57		
h — 19.	17 49 $\frac{2}{3}$	N. 78 35 $\frac{2}{3}$ W.	5 30	3	14 9	18 42	Mr. Rowe.	
	Amplit.	N. 84 30 W.	4 23	1	14 10	18 43	Mr. Rowe.	
D — 21.	20 17 $\frac{2}{3}$	S. 87 15 E.	4 29	3	18 22	20 30		
♀ — 25.	Amplit.	S. 86 15 E.	2 9	1	23 55	22 50		
h — 26.	Amplit.	N. 92 30 E.	2 30	1	24 28	22 45		
○ — 27.	Amplit.	N. 94 0 E.	1 32	1	25 17	22 30		
	11 50	S. 88 40 E.	1 52	2	25 18	22 30		
u Oct. 1.	14 39 $\frac{2}{3}$	S. 82 53 W.	3 44	4	27 28	18 0		
1773.						East.		
♀ Jan. 6.	14 11	S. 47 20 E.	22 30	5	60 26	27 30		
○ — 10.	18 25 $\frac{1}{3}$	N. 75 30 W.	25 47	3	62 14	34 40	Mr. Fannin. Mr. Bayley.	A compass made by Gregory.
	17 46 $\frac{1}{4}$	N. 77 35 W.		4				

1773.	Altitude of the Sun's L. L.	Magnetic Azimuth of the ☉'s Center.	Vari- ation West.	No. of Obs.	Latitude South.	Longitude East.	Observers.	Remarks.
☉ Jan. 10.	18 25 $\frac{1}{3}$ 17 46 $\frac{1}{4}$	N. 74 6 $\frac{1}{3}$ W. N. 75 30 W.	27 35	3 4	62 14	34 40	Mr. Bayley. Mr. Fannin.	A Knight's com- pafs made by Adams.
Mr. Bayley remarks, that the four preceding Observations were made in consequence of their finding that the variations, observed on board the Resolution, differed from those observed on board the Adventure; and he says that Knight's Compass stood on the fore-part of the quarter-deck, and that made by Gregory on the poop.								
☾ — 11.	17 39 $\frac{1}{2}$ 8 56 $\frac{1}{3}$	N. 75 45 W. S. 32 0 E.	27 17 26 14	2 5	63 40 64 15	35 40 37 0		
☽ — 12.	19 44 $\frac{5}{7}$	N. 72 17 $\frac{1}{7}$ W.	26 3	7	64 12	37 10		Very good.
☿ — 13.	16 54	S. 45 15 E.	31 5	2	64 4	39 30		Good also.
♃ — 14.	16 9 14 11	S. 103 45 W. S. 103 0 W.	28 41 31 30	3 3	63 57 63 57	39 35 39 35		Gregory's Compass.
♄ — 16.	15 13	S. 103 22 $\frac{1}{2}$ W.	29 43 29 49 28 54	4	65 0	40 3	Mr. Fannin. C. Furneaux.	Knight's ditto.
♀ — 22.	20 2 $\frac{1}{6}$	S. 53 8 $\frac{1}{3}$ E.	33 0 33 30	6	60 24	47 40	Mr. Kempe.	
☿ — 27.	15 5	S. 49 6 $\frac{2}{3}$ E.	30 55	3	55 5	52 10		
♂ Feb. 2.	11 12 $\frac{1}{2}$	S. 45 26 $\frac{1}{2}$ E.	32 28	8	48 43	58 53		Very good.
♃ — 4.	16 19 $\frac{2}{3}$	N. 64 10 W.	31 22	3	49 37	56 57		
♀ — 5.	13 37 $\frac{1}{2}$	N. 69 18 $\frac{3}{4}$ W.	28 55 28 55 29 10	4 4 5	48 32 48 32 48 9	60 20 60 20 61 22	C. Furneaux. Mr. Fannin.	
♄ — 6.	7 34	N. 75 23 $\frac{2}{3}$ W.	28 55	5	48 9	61 22		Great motion.
☉ — 7.	13 23	N. 69 17 W.	28 1	5	49 7	63 30		
☿ — 12.	10 3 $\frac{1}{3}$	S. 49 21 E.	32 3	3	51 0	71 30		Good.
☉ — 14.	15 37 $\frac{1}{3}$	N. 58 47 W.	32 15	5	51 50	76 35		
☿ — 18.	9 53 $\frac{1}{2}$ 8 33 $\frac{2}{3}$	S. 47 4 $\frac{1}{4}$ E. S. 51 23 $\frac{1}{3}$ E.	35 14 31 30	4 3	52 0 52 52	78 28 91 48	Mr. Kempe.	
♃ — 20.	13 15 $\frac{1}{4}$	S. 59 59 $\frac{3}{4}$ E.	30 11	4	52 20	99 23		
☉ — 21.	16 16	N. 56 28 $\frac{3}{4}$ W.	29 11	4	52 8	100 6		
♄ — 23.	3 19	N. 76 40 W.	24 46	6	52 16	105 10		Great motion.
☿ — 24.	13 4	N. 65 0 W.	25 17 22 22	5 1	52 16 52 2	105 18 107 27		
♃ — 25.	15 0	N. 65 25 W.	20 21	1	51 32	111 12		
☿ — 27.	15 23 2 42	S. 72 11 $\frac{1}{4}$ E. N. 81 6 $\frac{2}{3}$ W.	21 24 23 27 15 25	5 4 3	51 32 51 21 50 34	111 20 113 5 118 48		
☉ — 28.	11 54 $\frac{1}{4}$	S. 81 6 $\frac{1}{4}$ E.	11 18	4	49 30	124 17		
♂ March 3	18 18 13 21 $\frac{1}{3}$	N. 73 48 W. S. 91 29 E.	6 26 3 9	5 5	45 58 45 17	130 50 131 25		
♀ — 5.	20 39 $\frac{1}{4}$	N. 75 15 E.	2 5	4	43 46	138 42		Great motion.

ON BOARD THE ADVENTURE.

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1773.	Altitude of the Sun's L. L.	Magnetic Azimuth of the ☉'s Center.	Vari- ation East.	No. of Obs.	Latitude South.	Longitude East.	Remarks.
h March 6.	10 50 $\frac{3}{4}$	S. 94 56 E.	1 36	5	43 57	141 0	Great motion.
☉ — 7.	8 51 $\frac{1}{2}$	N. 90 3 $\frac{1}{2}$ W.	1 33	3	43 46	142 12	
☿ — 9.	23 6 $\frac{1}{2}$	N. 79 47 $\frac{3}{4}$ W.	7 6	9	43 42	145 20	
	Amplit.	S. 77 10 W.	7 2	1	43 42	145 30	
☿ — 10.	25 26	N. 58 40 E.	10 34	4	43 22	147 30	} In Adventure Bay.
☿ — 15.	11 20 $\frac{3}{4}$	S. 89 8 $\frac{1}{2}$ W.	9 6	3	43 23	147 30	
☿ — 16.	22 19 $\frac{1}{2}$	N. 62 22 $\frac{1}{2}$ E.	7 45	2	42 5	148 41	
☿ — 17.	5 52 $\frac{1}{8}$	S. 86 43 $\frac{1}{2}$ W.	6 57	3	41 10	147 50	
	8 38 $\frac{3}{4}$	N. 74 51 E.	8 45	5	40 57	147 48	
☿ — 19.	13 11	N. 72 2 $\frac{1}{2}$ E.	6 58	2	39 15	149 46	
h — 20.	11 39 $\frac{3}{4}$	S. 91 38 $\frac{1}{2}$ W.	8 14	6	39 22	150 40	
☿ — 24.	21 12 $\frac{3}{4}$	N. 56 53 $\frac{1}{2}$ E.	11 45	3	39 16	157 13	
☿ — 25.	9 6 $\frac{1}{2}$	S. 88 56 $\frac{1}{4}$ W.	11 18	4	39 26	158 7	
	7 49 $\frac{1}{2}$	N. 69 45 E.	10 41	4	39 54	159 15	
☿ — 26.	13 6 $\frac{1}{8}$	N. 86 15 W.	10 53	8	40 13	160 14	
h — 27.	8 55 $\frac{1}{2}$	N. 88 45 W.	10 13	9	40 16	161 16	
☉ — 28.	14 11	N. 84 9 $\frac{1}{2}$ W.	11 5	6	40 19	161 40	
	9 15 $\frac{3}{8}$	N. 66 25 E.	10 55	6	40 32	162 41	
☿ — 30.			12 41	3	41 17	165 16	
h April 3.	6 35	N. 64 34 $\frac{3}{4}$ E.	12 12	5	40 18	173 10	Off Cape Farewell.
☉ — 4.	4 53 $\frac{3}{4}$	N. 51 53 E.	15 2	5	41 2	174 0	In Cook's Straits.
☿ — 5.	9 23	N. 87 12 W.	14 3	7	40 55	174 1	In Admiralty Bay.
May.	Q. Charlotte's Sound.		13 31 $\frac{1}{2}$	8	41 6	174 1 $\frac{1}{2}$	
☿ June 7.	5 20 $\frac{1}{2}$	N. 39 45 E.	13 1	4	41 37	174 30	Off Cape Palliser.
☿ — 21.	10 44 $\frac{4}{7}$	N. 30 14 E.	10 34	5	44 30	196 17	
☿ — 22.	10 8 $\frac{9}{10}$	N. 52 55 W.	10 59	5	44 32	196 47	
☉ — 27.	12 27 $\frac{1}{2}$	N. 29 56 $\frac{1}{2}$ E.	10 4	4	42 29	197 55	Gregory's Compass.
	13 45 $\frac{1}{2}$	N. 28 36 $\frac{1}{2}$ E.	10 10	4	42 29	197 55	Knight's Compass.
☿ — 28.	13 8 $\frac{1}{8}$	N. 29 31 $\frac{1}{2}$ E.	10 23	6	42 40	198 50	
☿ — 29.	10 37 $\frac{3}{4}$	N. 33 20 $\frac{3}{4}$ E.	9 21	7	42 56	200 09	
☿ July 1.	10 32 $\frac{7}{8}$	N. 53 36 $\frac{7}{8}$ W.	9 58	7	43 6	202 35	
☿ — 2.	6 16 $\frac{3}{4}$	N. 39 18 E.	9 51	5	43 9	204 43	
☿ — 6.	6 13 $\frac{1}{2}$	N. 59 36 $\frac{1}{8}$ W.	7 56	8	41 52	208 35	
☿ — 8.	12 0	N. 35 45 E.	7 37	4	42 33	212 15	
☉ — 11.	7 41	N. 55 16 W.	6 1 $\frac{1}{2}$	4	43 28	217 41	
☿ — 12.	Amplit.	N. 64 30 W.	5 23	1	43 7	219 31	
☿ — 13.	4 42 $\frac{1}{8}$	N. 60 29 $\frac{1}{2}$ W.	6 24	6	42 50	220 38	
h — 17.	7 29 $\frac{4}{7}$	N. 49 49 E.	5 43	5	38 4	225 10	
☉ — 18.	8 58 $\frac{1}{8}$	N. 59 31 $\frac{7}{8}$ W.	5 13	8	37 42	225 30	
☿ — 19.	9 8	N. 61 4 $\frac{1}{2}$ W.	5 38	4	36 20	225 33	
	5 31	N. 52 5 $\frac{1}{2}$ E.	6 33	5	36 41	225 37	
☿ — 22.	5 51 $\frac{1}{7}$	N. 69 3 $\frac{7}{8}$ W.	5 59	7	30 46	225 0	
	6 57 $\frac{3}{7}$	N. 56 19 $\frac{4}{7}$ E.	5 43	7	29 33	224 5	
☿ — 26.	10 17 $\frac{3}{4}$	N. 66 26 $\frac{3}{4}$ W.	5 31	6	28 34	224 15	
	9 37 $\frac{4}{7}$	N. 55 52 $\frac{3}{7}$ E.	6 0	5	28 0	225 5	
☿ — 29.	12 36 $\frac{1}{2}$	N. 66 17 $\frac{1}{8}$ W.	5 33	6	27 20	223 52	
	5 38 $\frac{3}{4}$	N. 70 55 W.	5 29	5	27 20	223 56	

1773.	Altitude of the ☉'s L. L.	Magnetic Azi- muth of the ☉'s center.	Vari- ation East.	No. to No.	Lat- tude South.	Longitude East.	Remarks.
♀ July 30.	11 46 $\frac{4}{7}$	N. 66 57 $\frac{4}{7}$ W.	5 6	7	26 57	224 54	
♂ — 31.	8 11 $\frac{3}{5}$	N. 71 13 W.	6 23	5	26 9	225 15	
☉ Aug. 1.	12 44 $\frac{1}{2}$	N. 57 38 $\frac{1}{2}$ E.	6 7	6	23 27	226 18	
♂ — 2.	5 22 $\frac{1}{2}$	N. 62 54 $\frac{3}{4}$ E.	5 12	6	22 25	226 55	
♂ — 3.	6 40 $\frac{5}{8}$	N. 72 36 $\frac{2}{3}$ W.	4 29	6	21 59	227 3	
♂ — 4.	8 2 $\frac{2}{7}$	N. 72 44 $\frac{2}{7}$ W.	4 54	7	21 14	227 18	
♂ — 5.	6 5 $\frac{1}{7}$	N. 73 22 $\frac{1}{7}$ W.	4 6	7	20 28	227 57	
♂ — 10.	Amplit.	N. 69 10 E.	4 41	1	17 19	219 5	
	4 32 $\frac{2}{7}$	N. 68 28 $\frac{2}{7}$ E.	4 50	7	17 19	219 5	
♂ — 12.	Amplit.	N. 69 0 E.	5 29	1	17 14	215 30	
	6 10 $\frac{2}{3}$	N. 66 46 $\frac{2}{3}$ E.	5 35	6	17 14	215 26	
☉ — 15.	7 3 $\frac{2}{3}$	N. 66 47 E.	6 9	4	17 48	210 50	
♂ — 21.	15 15	N. 65 56 $\frac{2}{3}$ E.	5 38 $\frac{1}{2}$	6	17 44 $\frac{3}{4}$	210 35	
August.			5 0	29	17 29 $\frac{1}{4}$	210 27 $\frac{1}{2}$	At Point Venus.
♀ Sept. 3.	10 30 $\frac{1}{2}$	N. 85 27 $\frac{1}{3}$ W.	6 43	6	16 45	208 51 $\frac{1}{4}$	Huaheine.
♂ — 4.	11 42 $\frac{3}{4}$	N. 85 42 $\frac{1}{4}$ W.	7 0	4	16 45	208 51 $\frac{1}{4}$	Ditto.
☉ — 5.	8 37 $\frac{3}{8}$	N. 86 23 $\frac{3}{4}$ W.	6 14	4	16 45	208 51 $\frac{1}{4}$	Ditto.
	Amplit.	N. 89 30 W.	6 34	1	16 45	208 51 $\frac{1}{4}$	Ditto.
♂ — 6.	5 42 $\frac{2}{3}$	N. 87 33 $\frac{1}{3}$ W.	6 2	6	16 45	208 51 $\frac{1}{4}$	Ditto.
♂ — 7.	9 45 $\frac{1}{4}$	N. 86 32 $\frac{1}{8}$ W.	6 14	7	16 58	208 32	Off Uliatea.
♂ — 9.	11 49 $\frac{1}{3}$	N. 86 45 $\frac{5}{8}$ W.	6 0	6	16 45 $\frac{1}{3}$	208 35	At Uliatea.
♂ — 15.	4 18 $\frac{1}{4}$	N. 91 51 $\frac{1}{4}$ W.	6 15	4	16 45 $\frac{1}{3}$	208 35	Ditto.
♂ — 18.	12 0 $\frac{3}{4}$	N. 89 58 $\frac{3}{4}$ W.	5 50	4	17 23	206 40	
	10 41 $\frac{1}{3}$	N. 78 48 $\frac{1}{3}$ E.	6 12	6	17 36	206 20	
☉ — 19.	13 28 $\frac{1}{3}$	N. 77 45 E.	6 9	5	17 55	205 5	
♂ — 20.	13 21 $\frac{2}{3}$	N. 77 23 $\frac{1}{3}$ E.	7 7	3	18 20	204 40	
♂ — 21.	7 48 $\frac{1}{3}$	N. 93 35 W.	6 53	3	18 27 $\frac{1}{2}$	204 17	
	9 22 $\frac{1}{3}$	N. 79 23 $\frac{1}{3}$ E.	6 57	6	18 36	203 49	
☉ — 26.	12 38 $\frac{2}{3}$	N. 78 22 $\frac{1}{2}$ E.	8 26	6	20 36	193 37	
♂ — 29.	7 22 $\frac{1}{3}$	N. 80 40 $\frac{1}{6}$ E.	9 21	6	21 16	186 46	
♂ Oct. 2.	11 6 $\frac{1}{2}$	N. 99 3 $\frac{1}{6}$ W.	9 3	6	21 21 $\frac{1}{4}$	185 26	At Eaoowe.
☉ — 3.	Amplit.	S. 75 27 W.	10 11	1	21 4 $\frac{1}{2}$	185 4	At Tongatabu.
♂ — 7.	11 29 $\frac{2}{3}$	S. 78 15 W.	10 11	6	21 9	185 0	
♀ — 8.	9 16	S. 76 5 W.	11 14	3	22 5	184 57	Great motion.
♂ — 11.	15 24	N. 79 34 $\frac{3}{4}$ E.	11 19	4	25 3	181 58	
♂ — 12.			11 25	4	26 53	181 1	
♂ — 13.	14 4 $\frac{1}{4}$	S. 76 46 $\frac{3}{4}$ W.	11 39	4	27 32	180 50	
	16 46 $\frac{1}{2}$	N. 78 42 $\frac{1}{3}$ E.	11 28	6	28 24	180 18	
♂ — 14.	6 17 $\frac{5}{6}$	N. 84 15 $\frac{1}{6}$ E.	11 53	6	29 48	179 50	
☉ — 17.	10 56 $\frac{2}{3}$	S. 72 12 $\frac{5}{6}$ W.	13 41	6	32 48	180 0	
	14 47 $\frac{1}{2}$	N. 78 25 $\frac{1}{2}$ E.	13 17	4	33 30	180 2	
♂ — 20.	7 52	N. 84 0 E.	13 16	6	38 54	178 35	
♂ — 21.	13 9 $\frac{1}{2}$	S. 73 56 $\frac{1}{4}$ W.	13 4	4	39 18	177 58	Off New Zealand.
	8 44 $\frac{5}{6}$	N. 83 28 $\frac{1}{3}$ E.	13 32	6	39 53	177 16	Ditto.
♀ — 29.	10 24 $\frac{1}{2}$	S. 66 35 W.	14 43	6	41 48 $\frac{1}{2}$	175 58	Ditto.
♂ Nov. 3.	10 29	S. 65 40 $\frac{5}{6}$ W.	13 21	6	41 18	176 42	Ditto.
♂ — 4.	8 57 $\frac{1}{6}$	S. 64 4 $\frac{1}{2}$ W.	13 12	6	41 38	175 40	Cape Palliser due North.

1773.	Altitude of the ☉'s L. L.	Magnetic Azi- muth of the ☉'s Center.	Vari- ation East.	No. of Obs.	Lat- itude South.	Longitude East.	Remarks.
♂ Nov. 9.	8 4 $\frac{1}{2}$	S. 87 47 $\frac{5}{8}$ E.	13 12	6	38 21 $\frac{1}{2}$	178 33 $\frac{3}{4}$	In Tolaga Bay.
♀ — 10.	5 53 $\frac{1}{2}$	S. 86 50 E.	14 20	6	38 21 $\frac{1}{2}$	178 33 $\frac{3}{4}$	Ditto.
♂ — 15.	11 46	N. 91 1 $\frac{1}{2}$ E.	13 28	6	38 21 $\frac{1}{2}$	178 33 $\frac{3}{4}$	Ditto.
♂ — 16.	9 46 $\frac{1}{2}$	S. 60 57 $\frac{5}{8}$ W.	12 46	6	38 53	178 23	Off New Zealand;
♂ Dec. 23.	11 15	S. 83 25 $\frac{5}{8}$ E.	14 56	6	42 44	175 0	
♀ — 24.	12 13 $\frac{1}{2}$	S. 54 17 $\frac{1}{2}$ W.	14 59	6	43 22	175 13	
1774.							
♂ Jan. 10.	22 12 $\frac{9}{10}$	S. 91 43 $\frac{1}{2}$ E.	7 30	5	58 12	212 16	
♀ — 12.	10 52	S. 57 21 $\frac{2}{3}$ W.	8 44	6	58 45	215 50	
♀ — 19.	12 16 $\frac{1}{2}$	S. 62 53 $\frac{1}{2}$ W.	7 57	3	59 29	242 15	
♀ — 21.	13 54 $\frac{1}{2}$	S. 62 20 $\frac{5}{8}$ W.	12 1	6	60 10	247 25	
	12 39 $\frac{1}{2}$	S. 83 35 $\frac{1}{2}$ E.	11 4	6	59 47	248 15	
♂ — 22.	14 55 $\frac{5}{8}$	S. 64 53 $\frac{1}{2}$ W.	11 49	6	59 23	249 42	
♂ — 23.	14 13 $\frac{1}{2}$	S. 64 46 W.	11 4	5	59 19	252 54	
♂ — 24.	10 18 $\frac{1}{2}$	S. 56 41 $\frac{2}{3}$ W.	12 59	5	59 37	256 2	
♀ — 28.	14 15 $\frac{1}{2}$	S. 55 11 W.	22 59	6	61 47	271 50	
♂ — 29.	14 37 $\frac{1}{2}$	S. 55 26 $\frac{1}{2}$ W.	24 1 $\frac{1}{2}$	6	61 53	276 45	
♂ — 30.	13 49 $\frac{1}{2}$	S. 53 55 $\frac{5}{8}$ W.	24 40	6	61 31	281 55	
	9 47 $\frac{5}{8}$	S. 45 18 $\frac{2}{3}$ W.	25 47	6	61 30	282 0	
♂ Feb. 6.	13 26 $\frac{1}{2}$	N. 78 15 $\frac{5}{7}$ E.	19 20	7	59 30	313 0	Knight's Compass.
	14 31 $\frac{1}{2}$		19 41	2	59 30	313 1	Gregory's Compass.
♀ — 9.	16 4 $\frac{1}{2}$	S. 71 54 $\frac{1}{2}$ W.	15 54	6	57 12	318 48	
♀ — 16.	19 23 $\frac{5}{8}$	S. 89 45 $\frac{5}{8}$ W.	5 57	6	53 55	332 46	
	11 11 $\frac{5}{8}$	S. 77 44 $\frac{1}{2}$ W.	6 40	6	53 55	332 50	
	Amplit.	S. 53 57 W.	6 35	1	53 57	332 57	
♂ — 20.	27 9 $\frac{1}{10}$	N. 72 48 W.	2 14	6	53 21	341 7	
♂ — 21.	13 48 $\frac{1}{2}$	N. 88 4 E.	0 50	8	53 16	349 17	
			West.				
♂ — 22.	11 28	S. 89 35 $\frac{1}{2}$ W.	1 21	6	53 14	350 7	
♂ — 24.	12 43 $\frac{1}{2}$	N. 88 57 $\frac{1}{2}$ W.	4 57	6	52 51	356 7	
♂ — 26.	11 7 $\frac{1}{2}$	S. 81 13 $\frac{1}{2}$ E.	9 25	6	53 25	2 28	
Repeated a day, and rejected 360 degrees of Longitude.							
♂ — 26.	13 30 $\frac{3}{5}$	N. 75 39 $\frac{2}{5}$ W.	10 4	5	53 34	3 48	
♂ March 1.	12 26 $\frac{1}{3}$	N. 72 31 $\frac{1}{2}$ W.	12 44	6	53 48	8 21	
♂ — 3.	10 5 $\frac{1}{2}$	N. 71 5 $\frac{1}{2}$ W.	16 20	6	52 57	12 10	
♂ — 7.	12 23 $\frac{1}{5}$	N. 66 45 $\frac{4}{5}$ W.	16 54	10	48 15	14 2	
	10 22	S. 77 26 $\frac{1}{3}$ E.	16 48	6	47 53	14 0	
♂ — 12.	6 22 $\frac{1}{2}$	S. 71 53 $\frac{1}{2}$ E.	19 51	6	40 24	15 10	
	11 7	S. 75 52 $\frac{1}{2}$ E.	19 58	6	40 24	15 10	
♂ — 13.	16 25	N. 59 20 $\frac{5}{8}$ W.	20 9	6	39 36 $\frac{1}{2}$	15 18	
♂ — 14.	13 3	N. 61 56 $\frac{2}{5}$ W.	20 52	5	37 2	16 10	
♀ — 16.	13 29 $\frac{1}{2}$	S. 71 5 E.	20 49	4	34 21	17 32	
			21 32 $\frac{3}{4}$	20	33 55 $\frac{3}{4}$	18 23 $\frac{1}{4}$	Cape of Good Hope.
♂ April 18.	5 1 $\frac{1}{2}$	S. 87 6 $\frac{2}{3}$ E.	19 43	3	32 57	16 25	
♂ — 19.	7 19 $\frac{5}{8}$	S. 89 21 $\frac{2}{3}$ E.	19 29 $\frac{1}{3}$	6	32 38	16 3	
♂ — 21.	8 1 $\frac{1}{2}$	S. 90 54 $\frac{2}{3}$ E.	18 27	6	30 33	13 9	

1774.	Altitude of the ☉'s L. L.	Magnetic Azi- muth of the ☉'s Center.	Vari- ation East.	No. of Obs.	Latitude South.	Longi- tude East.	Remarks.
♀ April 22.	Amplit.	N. 56 45 W.	18 54	1	30 04	13 05	
	5 58	S. 90 0 $\frac{1}{2}$ E.	18 8	6	29 27	13 18	
♂ — 25.	7 45 $\frac{1}{2}$	S. 93 25 E.	15 37	6	25 7	8 40	
♂ — 26.	5 36 $\frac{2}{3}$	S. 92 42 $\frac{1}{3}$ E.	15 14	6	24 2	7 24	
♀ — 27.	5 41 $\frac{2}{3}$	N. 56 50 W.	15 6	3	23 38	7 4	
♀ — 29.	6 2 $\frac{3}{8}$	S. 93 13 $\frac{1}{2}$ E.	15 21	6	21 28	3 38	
♂ — 30.	5 44 $\frac{3}{4}$	S. 94 1 E.	14 41	4	20 56	2 45	
♂ May 2.	5 11	S. 94 0 $\frac{1}{2}$ E.	14 44	5	19 39	1 21	
	Amplit.	N. 87 25 E.	14 25	1	19 30	0 53	
♂ — 3.	3 29 $\frac{2}{3}$	S. 94 5 E.	14 15	3	19 30	0 53 West.	
♂ — 5.	6 8 $\frac{1}{10}$	S. 96 40 $\frac{1}{2}$ E.	13 22	4	17 58	1 11	
♂ — 9.	6 43 $\frac{1}{6}$	N. 57 16 $\frac{1}{3}$ W.	12 35	3	14 33	5 9	
♀ — 11.	6 7 $\frac{1}{6}$	N. 80 47 $\frac{5}{6}$ E.	10 44	6	11 0	9 9	
♀ — 13.	5 24 $\frac{5}{8}$	N. 59 24 $\frac{3}{4}$ W.	10 39	4	8 57	11 17	
	7 33 $\frac{1}{3}$	N. 80 28 $\frac{1}{6}$ E.	10 40	6	8 15	11 58	
♂ — 14.	11 0 $\frac{1}{4}$	N. 78 45 $\frac{1}{4}$ E.	9 37	4	6 52	13 56	
♂ — 15.	7 32	N. 78 51 $\frac{4}{5}$ E.	9 5	3	5 33	15 28	
♂ — 16.	10 46	N. 78 50 $\frac{2}{3}$ E.	9 31	3	4 17	16 56	
♂ — 17.	8 12	N. 78 41 $\frac{1}{6}$ E.	8 57	6	2 53	18 44	
♀ — 18.	5 12 $\frac{1}{2}$	N. 78 34 $\frac{1}{2}$ E.	8 36 $\frac{1}{2}$	4	1 21	19 40	
♂ — 19.	11 36 $\frac{2}{3}$	N. 60 44 $\frac{2}{3}$ W.	8 45	3	0 42 North.	20 10	
♀ — 20.	7 44 $\frac{1}{3}$	N. 78 25 $\frac{2}{3}$ E.	8 42	3	1 19	20 41	
♂ — 24.	8 44 $\frac{1}{3}$	N. 76 48 $\frac{1}{3}$ E.	7 16	6	5 19	22 17	
♀ — 25.	11 20 $\frac{1}{2}$	N. 76 31 $\frac{1}{3}$ E.	7 27	3	5 50	22 48	
♂ — 31.	15 26 $\frac{1}{3}$	N. 61 28 $\frac{1}{3}$ W.	7 28	6	6 38	25 20	
♀ June 1.	8 56 $\frac{3}{4}$	N. 76 20 $\frac{1}{2}$ E.	7 48 $\frac{1}{2}$	4	7 4	25 24	
♀ — 3.	9 7 $\frac{3}{4}$	N. 75 7 $\frac{1}{2}$ E.	6 46 $\frac{1}{2}$	4	7 34	26 33	
♂ — 6.	11 16 $\frac{3}{3}$	N. 73 27 $\frac{4}{5}$ E.	5 4	5	9 6	28 33	
♂ — 7.	12 35 $\frac{1}{4}$	N. 63 40 W.	4 41	4	9 30	29 2	
♂ — 9.	7 20 $\frac{1}{3}$	N. 63 58 $\frac{1}{3}$ W.	4 0	3	12 9	31 24	
♀ — 10.	9 41 $\frac{4}{5}$	N. 71 23 $\frac{4}{5}$ E.	2 55	5	14 23	33 39	
♂ — 11.	7 16 $\frac{2}{3}$	N. 64 36 $\frac{2}{3}$ W.	3 19	6	15 4	34 1	
♂ — 14.	12 12 $\frac{5}{8}$	N. 74 23 E.	4 57	6	20 23	36 30	
♀ — 15.	10 55	N. 64 13 $\frac{1}{3}$ W.	4 51	5	21 13	36 50	
♂ — 16.	9 44 $\frac{1}{5}$	N. 63 22 $\frac{5}{8}$ W.	5 17	5	22 45	37 40	
	9 38 $\frac{2}{3}$	N. 74 13 $\frac{1}{3}$ E.	5 35	6	23 28	38 13	
♂ — 18.	9 53	N. 62 13 $\frac{3}{4}$ W.	6 28	4	25 35	39 14	
♂ — 20.	14 35 $\frac{1}{3}$	N. 62 38 $\frac{1}{3}$ W.	8 20	6	28 14	39 4	
	15 20 $\frac{3}{4}$	N. 79 37 E.	8 11	4	28 57	39 20	
♀ — 24.	13 2 $\frac{1}{2}$	N. 60 20 $\frac{1}{3}$ W.	10 7	6	34 42	40 29	
♀ July 8.	5 48 $\frac{2}{3}$	N. 39 48 $\frac{2}{3}$ W.	22 42	5	48 19	20 20	

A
JOURNAL

OF THE

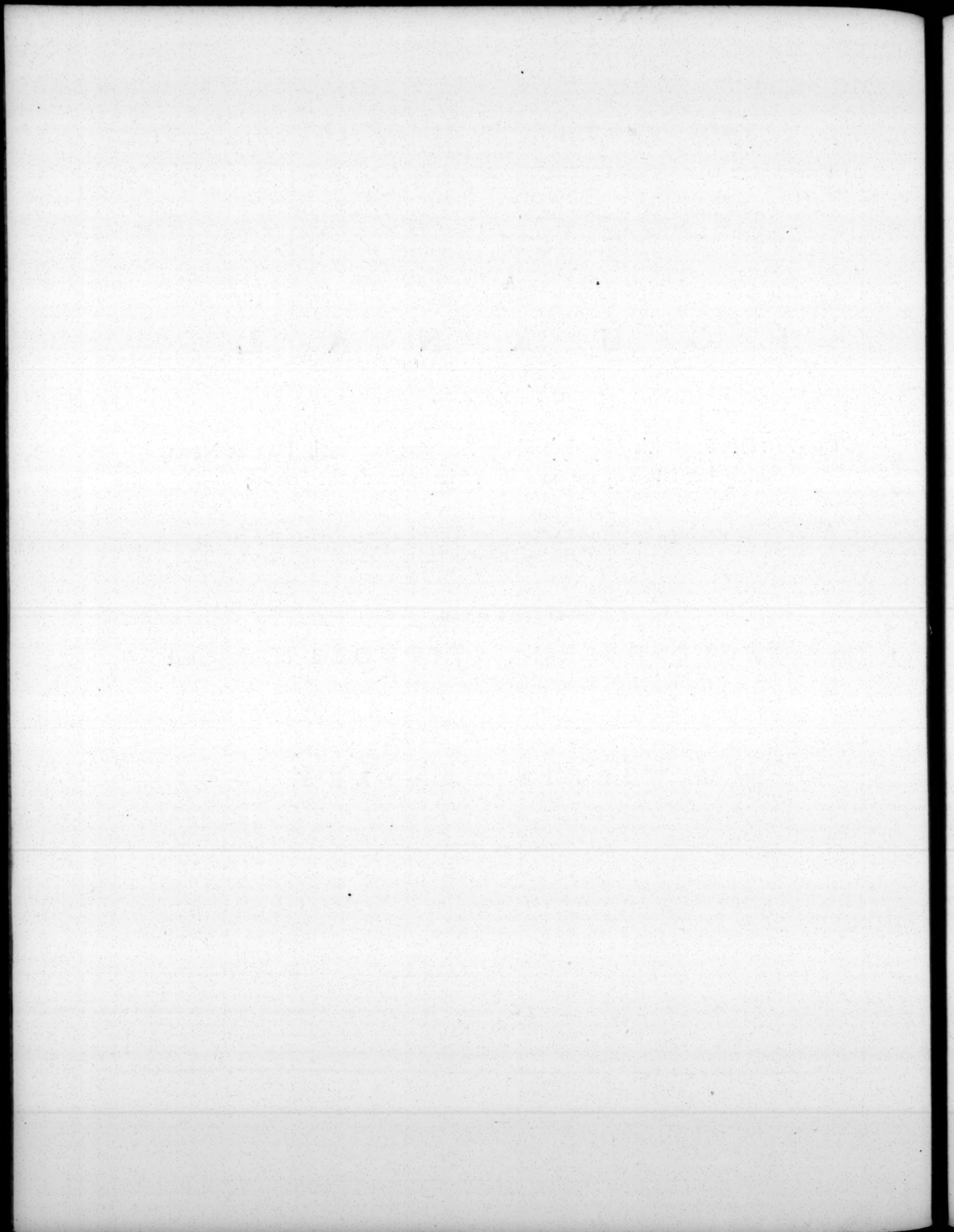
SITUATIONS of his Majesty's Sloop ADVENTURE each Day at Noon,
during her late Voyage on Discoveries towards the South;

As shewn by the Log, by Mr. ARNOLD's two Time-keepers, No. 1. and No. 2.
and also by Observation.

TOGETHER WITH

The LONGITUDES and LATITUDES of the most
remarkable Places seen in that Voyage.

By Mr. WILLIAM BAYLEY.



ASTRONOMICAL OBSERVATIONS.

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1772.	Course.	Dist. Miles.	Latitude North by		Longitude West by				Remarks.
			Account.	Observat.	Account.	Observat.	No. 1.	No. 2.	
			°	°	°	°	°	°	
○ July 12.			50 21 $\frac{1}{2}$		4 16 $\frac{1}{8}$	Took a departure from Drake's Island.			
☾ — 13.				50 6	4 33 $\frac{1}{2}$				
♂ — 14.	S. 16 $\frac{1}{2}$ W.	45 $\frac{1}{2}$	49 22 $\frac{1}{2}$		4 52 $\frac{1}{2}$		4 48 $\frac{1}{8}$	4 41 $\frac{5}{8}$	
♀ — 15.	S. 27 $\frac{1}{2}$ W.	25	49 0	48 50 $\frac{1}{2}$	5 18		5 11 $\frac{1}{8}$	5 7 $\frac{1}{8}$	
☾ — 16.	S. 43 W.	105	47 33	47 29 $\frac{1}{2}$	7 11		7 1 $\frac{1}{8}$	6 56 $\frac{5}{8}$	
♀ — 17.	S. 18 W.	68	46 24	46 26	7 41 $\frac{1}{2}$		7 18 $\frac{5}{8}$	7 10 $\frac{7}{8}$	
☾ — 18.	N. 35 W.	34 $\frac{1}{2}$	46 45		8 1 $\frac{3}{4}$		7 39 $\frac{3}{4}$	7 27 $\frac{4}{5}$	
○ — 19.	S. 19 $\frac{1}{2}$ W.	83	45 28	45 20 $\frac{2}{3}$	8 46		8 5	7 51 $\frac{1}{4}$	
☾ — 20.	S. 4 $\frac{1}{2}$ W.	77	44 4	43 56	8 55		8 14 $\frac{1}{2}$	7 56 $\frac{1}{8}$	
♂ — 21.	S. 53 $\frac{1}{2}$ W.	44	43 30	43 29 $\frac{2}{3}$	9 41		8 35 $\frac{2}{3}$	8 12 $\frac{1}{2}$	
♀ — 22.	N. 66 $\frac{1}{8}$ W.	17.3	43 33 $\frac{1}{2}$	43 37 $\frac{1}{2}$	10 3 $\frac{1}{2}$	9 32	8 42 $\frac{1}{8}$	8 18 $\frac{1}{8}$	
☾ — 23.	S. 35 $\frac{1}{4}$ W.	93.7	42 20	42 16	11 33	11 28	9 59 $\frac{1}{8}$	9 32 $\frac{1}{2}$	
♀ — 24.	S. 28 W.	156	39 59	40 3 $\frac{1}{4}$	13 07	11 55	11 29 $\frac{1}{2}$	10 55 $\frac{1}{8}$	
☾ — 25.	S. 28 W.	156	37 44	37 40 $\frac{1}{2}$	14 45	13 33	12 51 $\frac{7}{8}$	12 14 $\frac{1}{8}$	
○ — 26.	S. 27 W.	143	35 40	35 32	16 6	14 54	14 14 $\frac{1}{8}$	13 34 $\frac{1}{8}$	
☾ — 27.	S. 19 W.	114	33 44	33 42	16 50	15 38	15 2 $\frac{1}{8}$	14 18 $\frac{1}{8}$	
♂ — 28.	S. 49 $\frac{1}{2}$ W.	81	32 50	32 48	18 7	16 55	16 10 $\frac{1}{2}$	15 25 $\frac{1}{8}$	
○ Aug. 2.				32 0 $\frac{1}{2}$	16 29		16 56 $\frac{1}{8}$	15 49 $\frac{1}{8}$	
☾ — 3.	S. 23 W.	51 $\frac{1}{2}$	27 52 $\frac{1}{2}$	27 53	16 52		17 19 $\frac{1}{8}$	16 9 $\frac{1}{8}$	
♂ — 4.	S. 28 $\frac{1}{2}$ W.	73	28 37 $\frac{1}{2}$	28 40	17 32 $\frac{1}{2}$	18 3	18 8 $\frac{1}{8}$	16 53 $\frac{1}{8}$	
♀ — 5.	S. 23 W.	51 $\frac{1}{2}$	27 52	27 53	17 55 $\frac{1}{2}$	18 26	18 41 $\frac{1}{8}$	17 13 $\frac{1}{8}$	
☾ — 6.	S. 10 $\frac{1}{8}$ W.	108	26 7	26 6 $\frac{1}{2}$	18 17	19 2	19 2 $\frac{1}{8}$	17 32 $\frac{1}{8}$	
♀ — 7.	S. 11 W.	124 $\frac{1}{2}$	24 5	24 9	18 42	19 27	19 4 $\frac{1}{8}$	17 56 $\frac{1}{8}$	
☾ — 8.	S. 12 $\frac{1}{2}$ W.	114	22 18	22 10	19 11	19 56	19 57 $\frac{1}{8}$	18 25 $\frac{1}{8}$	
○ — 9.	S. 23 W.	125	20 14	20 9	20 05	20 50 $\frac{1}{2}$	20 24 $\frac{1}{8}$	18 53 $\frac{1}{8}$	
☾ — 10.	S. 23 $\frac{1}{2}$ W.	140	18 1	18 01	21 4 $\frac{3}{4}$	22 11 $\frac{1}{2}$	21 38 $\frac{1}{8}$	20 01 $\frac{1}{8}$	
♂ — 11.	S. 19 $\frac{1}{2}$ W.	116	16 12	16 12	21 45	22 50	22 19 $\frac{1}{8}$	20 40 $\frac{1}{8}$	
♀ — 12.	S. 30 $\frac{1}{2}$ W.	75 $\frac{1}{2}$	15 7		22 24 $\frac{1}{2}$	23 25	22 48 $\frac{1}{8}$	21 6 $\frac{1}{8}$	
	Porto Praya in St. Jago.			14 54		23 29			
☾ — 15.	S. 30 $\frac{1}{2}$ E.	74	13 48		22 48	22 48	22 30 $\frac{1}{8}$	20 33 $\frac{1}{8}$	
○ — 16.	S. 7 E.	86 $\frac{1}{2}$	12 22	12 22	22 37	22 30	22 20 $\frac{1}{8}$	20 20 $\frac{1}{8}$	
☾ — 17.	S. 45 E.	45.3	11 50		22 04	21 57	21 47 $\frac{1}{8}$	19 44 $\frac{1}{8}$	
♂ — 18.	S. 34 $\frac{1}{2}$ E.	51.6	11 20	11 25	21 28	21 21 $\frac{1}{2}$	20 42 $\frac{1}{8}$	18 38 $\frac{1}{8}$	
♀ — 19.	S. 36 $\frac{1}{2}$ E.	47.7	10 47		20 59	20 52	19 12 $\frac{1}{8}$	17 6 $\frac{1}{8}$	
☾ — 20.	S. 8 $\frac{1}{2}$ E.	73.7	9 34		20 48	20 41	19 34 $\frac{1}{8}$	17 27 $\frac{1}{8}$	
♀ — 21.	S. 33 $\frac{1}{2}$ E.	32	9 7	8 41	20 12	20 06	18 58 $\frac{1}{8}$	16 48 $\frac{1}{8}$	
☾ — 22.	S. 47 $\frac{1}{2}$ E.	68.2	7 55	7 52	19 22	19 16	18 7 $\frac{1}{8}$	15 54 $\frac{1}{8}$	
○ — 23.	S. 39 $\frac{1}{2}$ E.	76 $\frac{1}{2}$	6 56	6 53 $\frac{1}{2}$	18 30	18 24	16 3 $\frac{1}{8}$	13 50 $\frac{1}{8}$	
☾ — 24.	S. 66 $\frac{1}{2}$ E.	73.8	6 24	6 24 $\frac{1}{2}$	17 24	17 18	14 35 $\frac{1}{8}$	12 20 $\frac{1}{8}$	
♂ — 25.	S. 55 $\frac{1}{2}$ E.	55 $\frac{1}{2}$	5 52 $\frac{1}{2}$	5 54	16 38	16 32	13 49 $\frac{1}{8}$	11 31 $\frac{1}{8}$	
♀ — 26.	S. 59 E.	64 $\frac{1}{4}$	5 12	5 10	15 43	15 37	11 46 $\frac{1}{8}$	9 29 $\frac{1}{8}$	
☾ — 27.	S. 41 E.	74 $\frac{1}{4}$	4 16	4 14	14 54	14 48	10 56 $\frac{1}{8}$	8 34 $\frac{3}{8}$	
♀ — 28.	S. 63 $\frac{1}{2}$ E.	74 $\frac{1}{2}$	3 44	3 41	13 47	13 41	9 22 $\frac{1}{8}$	6 41 $\frac{1}{8}$	
☾ — 29.	S. 65 $\frac{1}{2}$ E.	62 $\frac{1}{4}$	3 13 $\frac{3}{4}$	3 15 $\frac{3}{4}$	12 50 $\frac{1}{2}$	12 44 $\frac{1}{2}$	8 47 $\frac{1}{8}$	5 44 $\frac{3}{8}$	
○ — 30.	S. 61 $\frac{1}{2}$ E.	75 $\frac{3}{4}$	2 38	2 40	11 44	11 38	6 28 $\frac{1}{8}$	4 5 $\frac{1}{8}$	
☾ — 31.	S. 84 $\frac{1}{2}$ E.	62.6	2 34	2 34 $\frac{1}{2}$	10 42 $\frac{1}{2}$	10 36 $\frac{1}{2}$	4 18 $\frac{3}{8}$	1 48 $\frac{1}{8}$	
♀ Sept. 1.	S. 45 $\frac{1}{4}$ W.	49	1 59	1 59	11 18	5 46 $\frac{1}{2}$	4 36 $\frac{1}{8}$	2 0 $\frac{1}{8}$	It appears from the Watch that a current has set for several days East, or nearly so, and the Observ. confirm it.

It appears from the Watch that a current has set for several days East, or nearly so, and the Observ. confirm it.

1772.	Course.	Dist.	Latitude North by		Longitude West by		No. 1.	No. 2.	Remarks.
			Account.	Observat.	Account.	Observat.			
		Miles.	o	o	o	o	o	o	
Sept. 2.	S. 53 W.	59.6	1 23	1 23	12 5 $\frac{1}{2}$	6 34 $\frac{1}{2}$	4 24 $\frac{1}{8}$	2 48 $\frac{1}{8}$	
3.	S. 72 W.	74 $\frac{1}{4}$	1 0	1 01	13 16	8 32	6 35 $\frac{1}{8}$	4 5 $\frac{1}{8}$	
4.	S. 81 W.	64 $\frac{1}{2}$	0 49	0 51	14 20	9 31	7 56 $\frac{1}{8}$	5 24 $\frac{1}{8}$	
5.	N. 69 $\frac{1}{2}$ W.	15.7	0 56	0 56 $\frac{1}{2}$	14 35	9 42	8 08 $\frac{1}{8}$	5 37 $\frac{1}{8}$	
6.	S. 64 E.	48	0 35	0 36	13 53	9 21	7 12 $\frac{1}{8}$	4 32 $\frac{1}{8}$	
7.	S. 72 E.	43	0 23	0 23 $\frac{1}{2}$	13 13	8 44	6 25 $\frac{1}{8}$	3 56 $\frac{1}{8}$	
			South.	South.					
8.	S. 57 $\frac{2}{3}$ W.	76 $\frac{3}{4}$	0 18	0 18	14 18	9 49	7 28 $\frac{1}{8}$	4 58 $\frac{1}{8}$	
9.	S. 54 W.	62	0 54	0 54 $\frac{1}{2}$	15 08	10 39	8 24 $\frac{1}{8}$	5 52 $\frac{1}{8}$	
10.	S. 31 W.	72	1 56 $\frac{1}{2}$	1 57 $\frac{1}{2}$	15 45	11 16	9 45 $\frac{1}{8}$	7 11 $\frac{1}{8}$	
11.	S. 31 $\frac{1}{2}$ W.	72	2 58	2 59 $\frac{1}{2}$	16 23	11 54	10 55 $\frac{1}{8}$	8 19 $\frac{1}{8}$	
12.	S. 22 $\frac{1}{2}$ W.	75.6	4 10	4 10 $\frac{1}{2}$	16 52	12 46	11 4 $\frac{1}{8}$	9 9 $\frac{1}{8}$	
13.	S. 41 $\frac{1}{2}$ W.	72 $\frac{1}{2}$	5 3 $\frac{1}{2}$	5 5	17 40	13 34	12 46 $\frac{1}{8}$	10 6 $\frac{1}{8}$	
14.	S. 32 W.	98 $\frac{1}{2}$	6 29 $\frac{1}{2}$	6 29 $\frac{1}{2}$	18 33	14 27	13 47 $\frac{1}{8}$	11 7 $\frac{1}{8}$	
15.	S. 21 $\frac{1}{3}$ W.	106	8 9 $\frac{1}{2}$	8 10	19 12	15 06	14 26 $\frac{1}{8}$	11 46 $\frac{1}{8}$	The Ship considerably to the S. W. of her reckoning.
16.	S. 22 $\frac{1}{4}$ W.	94	9 36	9 37	19 47 $\frac{1}{2}$	15 41 $\frac{1}{2}$	15 20 $\frac{1}{8}$	12 39 $\frac{1}{8}$	
17.	S. 28 $\frac{2}{3}$ W.	95	10 59	10 0 $\frac{1}{3}$	20 34	16 28	16 6 $\frac{3}{8}$	13 28 $\frac{1}{8}$	
18.	S. 25 $\frac{1}{2}$ W.	95 $\frac{1}{4}$	12 26	12 26 $\frac{1}{2}$	21 15 $\frac{1}{2}$	17 38 $\frac{1}{3}$	16 41 $\frac{1}{8}$	14 01 $\frac{1}{8}$	
19.	S. 29 $\frac{1}{2}$ W.	113	14 25	14 4 $\frac{1}{2}$	22 13 $\frac{1}{2}$	18 36	17 39 $\frac{1}{8}$	14 42 $\frac{1}{8}$	
20.	S. 24 $\frac{2}{3}$ W.	99	15 35	15 34 $\frac{2}{3}$	22 56 $\frac{1}{2}$	19 14	18 17 $\frac{1}{8}$	15 13 $\frac{1}{8}$	
21.	S. 23 $\frac{1}{2}$ W.	111	17 08	17 9 $\frac{1}{3}$	23 38	19 56	18 56 $\frac{3}{8}$	16 13 $\frac{1}{8}$	
22.	S. 15 W.	93	18 39	18 39 $\frac{1}{2}$	24 3 $\frac{1}{2}$	20 36	19 26 $\frac{1}{8}$	16 35 $\frac{1}{8}$	
23.	S. 10 $\frac{1}{6}$ W.	88	20 03	20 6 $\frac{2}{3}$	24 20	21 32	19 56 $\frac{1}{8}$	17 3 $\frac{1}{8}$	
24.	S. 10 $\frac{1}{2}$ W.	83 $\frac{1}{2}$	21 29 $\frac{1}{2}$	21 28 $\frac{1}{2}$	24 36 $\frac{1}{2}$	22 01	20 17 $\frac{1}{8}$	17 24 $\frac{1}{8}$	
25.	S. 31 $\frac{1}{4}$ W.	96	22 48	22 50	25 30	22 55	20 40 $\frac{1}{8}$	17 59 $\frac{1}{8}$	
26.	S. 5 $\frac{1}{2}$ E.	83 $\frac{1}{2}$	24 11	24 13	25 21.4	22 46.4	21 30 $\frac{1}{8}$	18 13 $\frac{1}{8}$	
27.	S. 2 $\frac{1}{3}$ E.	27	24 38.6	24 40	25 20.2	22 45.2	21 22 $\frac{1}{8}$	17 36 $\frac{1}{8}$	
28.	S. 22 $\frac{1}{2}$ E.	52	25 25	25 28	24 58	22 23	21 1 $\frac{1}{8}$	17 23 $\frac{1}{8}$	
29.	S. 57 E.	82 $\frac{1}{4}$	26 13	26 13	23 42	21 50	19 50 $\frac{1}{8}$	16 3 $\frac{1}{8}$	
30.	S. 67 $\frac{2}{3}$ E.	119	27 0	26 58	21 40	19 48	17 41 $\frac{1}{8}$	13 53 $\frac{1}{8}$	
Oct. 1.	S. 57 $\frac{1}{6}$ E.	105	27 23	27 25	19 43	18 13	15 32 $\frac{1}{2}$	11 41 $\frac{1}{8}$	
2.	S. 77 $\frac{1}{2}$ E.	42 $\frac{1}{2}$	27 34	27 33	18 57	17 07	14 35 $\frac{1}{8}$	10 29 $\frac{1}{8}$	A S. W. swell.
3.	S. 68 $\frac{2}{3}$ E.	85 $\frac{1}{4}$	28 05	28 04	17 18	16 02	12 53 $\frac{1}{8}$	8 45 $\frac{1}{8}$	Ditto.
4.	S. 64 $\frac{2}{3}$ E.	128	28 59	28 58 $\frac{1}{2}$	15 09	14 11	10 27 $\frac{1}{8}$	6 8 $\frac{1}{8}$	Ditto.
5.	S. 88 $\frac{1}{2}$ E.	77 $\frac{1}{2}$	29 01	29 0	13 32 $\frac{1}{2}$	12 21	8 47 $\frac{1}{8}$		
6.	S. 8 $\frac{2}{3}$ W.	42 $\frac{1}{2}$	29 43 $\frac{1}{2}$	29 42 $\frac{1}{2}$	13 42	12 29	8 54 $\frac{3}{8}$		
7.	South.	96	31 18	31 18	13 40	12 29	9 7 $\frac{1}{8}$		
8.	S. 9 $\frac{3}{4}$ E.	85	32 42	32 42 $\frac{1}{2}$	13 23	12 12	8 50 $\frac{1}{8}$		
9.	S. 42 E.	94.3	33 51 $\frac{1}{2}$	33 52 $\frac{1}{2}$	12 07	10 56	7 56 $\frac{1}{8}$		
10.	S. 67 $\frac{1}{2}$ E.	93	34 27	34 28 $\frac{1}{2}$	10 24	19 13	5 25 $\frac{1}{8}$		
11.	S. 78 E.	63 $\frac{1}{2}$	34 41	34 41	9 8	6 50	4 5 $\frac{1}{2}$		
12.	S. 73 E.	24	8 37	6 04	8 37	6 04	3 33 $\frac{1}{8}$		
13.	S. 71 E.	58 $\frac{1}{2}$	35 08	35 09	7 30	6 0	2 25 $\frac{1}{8}$		
14.	S. 77 $\frac{1}{3}$ E.	92 $\frac{1}{2}$	35 30	35 29 $\frac{1}{2}$	5 34	4 04	0 29 $\frac{1}{8}$		
							East.		
15.	S. 88 E.	95.6	35 33	35 33	3 25	1 51	1 55 $\frac{1}{8}$		
						East.			
16.	N. 82 $\frac{1}{3}$ E.	142 $\frac{1}{4}$	35 13	35 14	0 27	1 07	5 06 $\frac{1}{8}$		

ON BOARD THE ADVENTURE.

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1772.	Course.	Dist.	Latitude South by		Longitude East by		No. 1.	Remarks.
			Account.	Observat.	Account.	Observat.		
		Miles.						
h Oct. 17.	N. 81 E.	110	34 57	34 57½	1 41	4 49	7 25¼	
o — 18.	N. 79½ E.	135	34 33	34 33	4 27	7 35	10 9¾	
d — 19.	N. 78¾ E.	58	34 22	34 21	5 27	8 35	10 58¾	
δ — 20.	S. 38 E.	30.4	34 45	34 45	5 49.6	8 7½	11 24¾	
♀ — 21.	S. 21 E.	50¼	35 33	35 32	6 16	8 37	11 24¾	
u — 22.	S. 17 E.	80	36 48½	36 49	6 45	9 6	11 53¾	
♀ — 23.	S. 56¼ E.	35.3	37 09	37 10	7 24	9 45	12 32¾	
h — 24.	N. 61½ E.	99.3	36 39	36 39	9 22½	11 43½	15 8¾	
o — 25.	N. 58 E.	138	35 27½	35 26	11 47½	14 08	17 24¾	
d — 26.	N. 59½ E.	85½	34 42	34 43	13 16½	15 37	18 32¾	
δ — 27.	N. 47 E.	82	33 47	33 47	14 29½	16 50	19 33¾	
♀ — 28.	N. 79½ E.	49	33 39	38 38	15 28½	17 49	20 23¾	
u — 29.	S. 78½ E.	68	33 51½		16 49	19 09	21 43¾	
d Nov. 23.	S. 40 W.	49½	34 33	34 34	17 41¾		17 38½	
δ — 24.	S. 9½ E.	46½	35 18.6	35 20	17 51¼		17 47¾	
♀ — 25.	S. 22½ W.	123	37 13.6	37 14	16 52¾		16 39¾	Both days the ship was S. W. of Acc.
u — 26.	S. 20¾ W.	113½	39 0	39 0	16 01¾		15 42¼	
♀ — 27.	S. 24¾ E.	67	40 0	40 01	16 37¾		16 34¼	
h — 28.	S. 5 W.	54	40 55	40 55	16 31¼		16 28	
o — 29.	S. 1 W.	74.4	42 9	42 8	16 36		16 26¼	
d — 30.	S. 53¼ E.	30	42 27	42 26	17 9½	17 39	17 54¾	
δ Dec. 1.	S. 5 E.	48½	43 15	43 14	17 20	17 53¼	18 5¼	
♀ — 2.	S. 68½ E.	33	43 26		18 3½	18 36¾	17 57¾	
u — 3.	S. 10¾ E.	63	44 29	44 28	18 20	18 40	19 23¾	
♀ — 4.	S. 11¼ W.	79	45 45	45 44	17 58½	18 2	18 44	
h — 5.	S. 14½ W.	87	47 9	47 9	17 27¼	17 31	18 10¼	
o — 6.	S. 2 E.	73½	48 23	43 23	17 30¾	17 34½	18 13¾	
d — 7.	S. 1½ W.	86.1	49 48	49 49	17 0¼	17 4	17 43¼	
δ — 8.	N. 83½ E.	28½	49 46		17 37¼	17 41½	18 21¼	
♀ — 9.	S. 72 E.	12	49 50	49 47	17 55¼	18 0	21 05¼	
u — 10.	S. 5½ W.	77½	51 3	51 4	17 43¼	17 48	20 55¼	The first Ice Island.
♀ — 11.	S. 17½ E.	48	51 50	51 50	18 6¼	18 11	21 43¼	Ice Islands.
h — 12.	S. 23½ W.	62	52 46		17 17¾	17 23	20 54¼	Many Ice Islands.
o — 13.	S. 1¾ E.	65.2	53 51		17 21¼	17 26½	21 8¼	Ditto.
d — 14.	S. 25¾ E.	68	54 52	54 52	17 48¾	18 16½	21 58¼	Ditto Penguins.
δ — 15.	S. 57½ E.	17	55 2	Cloudy.	18 14¼	18 41½	22 23¾	Ice Islands.
♀ — 16.	N. 75¾ E.	57	55 06	Cloudy.	18 21½	18 49¾	22 41½	Many ditto.
u — 17.	S. 45½ E.	28½	55 20	55 21	18 59½	19 27	23 54¼	Ditto ditto.
♀ — 18.	S. 10 E.	20½	55 1	Cloudy.	19 5¼	24 26	24 13¼	Ditto ditto.
h — 19.	N. 44½ E.	36	54 34	Cloudy.	19 49¾	25 10	25 30¼	S. S. E. current, ran ½ a mile an h.
o — 20.	N. 73¾ E.	79	54 11	Cloudy.	22 6¼	27 27	27 46¼	
d — 21.	N. 84¾ E.	41	54 7	54 7	23 6¼	28 27	29 40½	Many Ice Islands.
δ — 22.	S. 2¾ E.	49	54 50	54 52	23 40¼	29 1	30 14½	Ditto.
♀ — 23.	S. 50½ E.	51.6	55 25	55 24	24 52¼	30 12	32 2¼	Ditto.
u — 24.	S. 5¾ W.	66	56 30	56 29½	24 42¼	30 02	32 0	Log 48 feet to 29"½.
♀ — 25.	S. 20½ W.	90	57 54	Cloudy.	23 46¼	29 6		Ditto.
h — 26.	S. 67½ W.	94	58 30	58 30	21 4¼	26 22	27 32¼	Little Ice.

1772.	Course.	Dist. Miles.	Latitude South by		Longitude East by			Remarks.
			Account.	Observ.	Account.	Observ.	No. 1.	
○ Dec. 27.	N. $82\frac{3}{4}$ W.	$64\frac{1}{2}$	58 21	58 21	18 $48\frac{1}{4}$	24 6	25 $16\frac{1}{4}$	Current S. S. E. $\frac{1}{4}$ of a mile an hour.
☽ ——— 28.	S. 73 W.	62	58 39	Cloudy.	16 $53\frac{3}{4}$	22 11	23 $21\frac{1}{4}$	Many birds.
☿ ——— 29.	S. $65\frac{1}{4}$ W.	74	59 10	59 11	14 $39\frac{3}{4}$	19 57	21 $7\frac{1}{4}$	Little Ice.
♄ ——— 30.	S. $75\frac{3}{4}$ W.	46	59 22	59 22	13 $7\frac{1}{4}$	18 25	17 $27\frac{1}{4}$	Many Penguins.
♃ ——— 31.	S. $59\frac{1}{2}$ W.	65	59 55	Cloudy.	11 $27\frac{1}{4}$	16 45	21 $7\frac{1}{4}$	Log 48 feet to 26".
1773.								
♀ Jan. 1.	S. $74\frac{3}{4}$ W.	55	60 9	Cloudy.	9 $42\frac{1}{4}$	15 0	14 $02\frac{1}{4}$	Log 48 feet to 29" $\frac{1}{2}$.
♂ ——— 2.	S. 55 W.	62	59 15	59 20	7 $54\frac{1}{4}$	10 $4\frac{1}{2}$	10 $58\frac{1}{4}$	Many Penguins.
○ ——— 3.	S. $84\frac{1}{4}$ E.	40	59 22	Cloudy.	9 $4\frac{1}{4}$	11 $24\frac{1}{2}$	12 $18\frac{1}{4}$	Much Ice.
☽ ——— 4.	N. $76\frac{3}{4}$ E.	95	59 0	59 1	12 $4\frac{1}{4}$	14 24	15 $8\frac{1}{4}$	Many whales.
☿ ——— 5.	S. 76 E.	$151\frac{1}{2}$	59 37	Cloudy.	16 $54\frac{1}{4}$	19 14	20 $8\frac{1}{4}$	Swell from N. W.
♄ ——— 6.	S. $79\frac{1}{2}$ E.	130	59 $59\frac{1}{2}$	59 59	20 $48\frac{1}{4}$	23 8	—	Ice.
♃ ——— 7.	S. 73 E.	120	60 34	$60\ 36\frac{1}{2}$	24 $41\frac{1}{4}$	27 1	28 $58\frac{1}{4}$	N. W. swell cont.
♀ ——— 8.	S. $70\frac{1}{2}$ E.	130	61 18	61 19	29 $0\frac{1}{4}$	31 20	33 $12\frac{1}{4}$	Log 48 feet to 29" $\frac{1}{2}$.
♂ ——— 9.	S. $76\frac{1}{4}$ E.	67	61 36	61 35	32 $6\frac{1}{4}$	33 26	35 $17\frac{1}{4}$	Much ice.
○ ——— 10.	S. 55 E.	38	61 56	61 55	32 $10\frac{1}{4}$	34 30	37 $1\frac{1}{4}$	Watered at the ice.
☽ ——— 11.	S. $22\frac{1}{2}$ E.	90	63 19	63 19	33 $26\frac{1}{4}$	35 $46\frac{1}{2}$	38 $18\frac{1}{4}$	Yet much ice.
☿ ——— 12.	S. $30\frac{2}{3}$ E.	65	64 14	64 14	34 $40\frac{3}{4}$	37 0	39 $3\frac{1}{4}$	Took up more ice.
♄ ——— 13.	East.	16	64 14	$64\ 13\frac{7}{8}$	35 $17\frac{1}{4}$	37 37	39 $40\frac{1}{4}$	Much ice and few birds.
♃ ——— 14.	N. $26\frac{1}{2}$ E.	16	63 $58\frac{1}{2}$	63 59	35 $34\frac{1}{4}$	39 41	39 $57\frac{3}{4}$	Many ice islands.
♀ ——— 15.	S. $21\frac{1}{3}$ E.	$23\frac{1}{2}$	63 35	63 35	35 $54\frac{1}{4}$	40 03	40 $16\frac{1}{4}$	Many birds.
♂ ——— 16.	South.	57	64 32	64 32	35 $54\frac{1}{4}$	40 03	39 $57\frac{1}{4}$	Stopped by the ice.
○ ——— 17.	S. $2\frac{1}{2}$ W.	124	66 36	66 34	35 $44\frac{1}{4}$	39 53	39 $49\frac{1}{4}$	Many ice islands.
☽ ——— 18.	S. $5\frac{1}{2}$ E.	37.2	65 58	$65\ 58\frac{1}{2}$	35 $53\frac{1}{2}$	40 02	39 $57\frac{1}{4}$	Ditto.
☿ ——— 19.	N. 15 E.	$97\frac{1}{2}$	64 $24\frac{1}{2}$	$64\ 29\frac{1}{2}$	36 $49\frac{4}{5}$	40 $58\frac{2}{3}$	40 $45\frac{1}{4}$	Ditto.
♄ ——— 20.	N. $37\frac{1}{2}$ E.	38	63 $59\frac{1}{2}$	Cloudy.	37 $49\frac{4}{5}$	41 $41\frac{2}{3}$	40 $47\frac{1}{4}$	Ditto.
♃ ——— 21.	N. $29\frac{1}{8}$ E.	$84\frac{1}{2}$	62 $45\frac{1}{2}$	Cloudy.	39 $15\frac{1}{4}$	43 14	42 $10\frac{3}{4}$	Ditto.
♀ ——— 22.	N. $41\frac{1}{3}$ E.	100	61 31	$61\ 33\frac{1}{4}$	41 $30\frac{2}{3}$	45 $29\frac{1}{2}$	44 $1\frac{1}{4}$	Ditto.
♂ ——— 23.	N. 45 E.	131	60 $0\frac{3}{5}$	60 2	44 $37\frac{1}{4}$	48 $36\frac{1}{2}$	47 $8\frac{1}{2}$	Ditto.
○ ——— 24.	N. 45 E.	138	58 24	$58\ 23\frac{3}{4}$	47 $48\frac{1}{4}$	51 $47\frac{1}{2}$	50 $20\frac{1}{2}$	Ditto.
☽ ——— 25.	N. $76\frac{1}{2}$ E.	69	58 8	Cloudy.	49 $58\frac{1}{4}$	53 $57\frac{1}{2}$	52 $30\frac{1}{4}$	Ditto.
☿ ——— 26.	North.	46	57 22	Cloudy.	49 $58\frac{1}{4}$	53 57	50 $49\frac{1}{4}$	Ditto.
♄ ——— 27.	N. 17 E.	56	56 28	$56\ 29\frac{3}{4}$	50 $27\frac{1}{4}$	51 55	52 $18\frac{1}{4}$	Ditto.
♃ ——— 28.	N. 18 E.	124	54 32	54 32	51 $33\frac{1}{4}$	53 01	53 $12\frac{1}{4}$	Ditto.
♀ ——— 29.	N. $17\frac{1}{2}$ E.	130	52 29	$52\ 27\frac{3}{4}$	52 $36\frac{1}{4}$	54 04	54 $15\frac{1}{4}$	Ditto.
♂ ——— 30.	N. 45 E.	80.7	51 30	Cloudy.	53 $54\frac{1}{4}$	55 22	55 $33\frac{1}{4}$	Much sea weed and many divers.
○ ——— 31.	N. $36\frac{1}{2}$ E.	52	50 48	50 48	54 $43\frac{3}{4}$	56 $11\frac{1}{2}$	58 $30\frac{1}{4}$	
☽ Feb. 1.	N. $12\frac{2}{3}$ E.	127	48 44	Cloudy.	55 $27\frac{1}{4}$	56 55	59 $24\frac{1}{4}$	
☿ ——— 2.	N. $80\frac{1}{4}$ E.	71	48 28	48 32	57 $35\frac{1}{4}$	59 3	61 $34\frac{1}{4}$	A N. W. swell.
♄ ——— 3.	S. $40\frac{1}{3}$ E.	$17\frac{1}{2}$	48 45	$48\ 44\frac{3}{4}$	57 $51\frac{1}{4}$	59 19	62 $15\frac{1}{4}$	
♃ ——— 4.	S. $63\frac{1}{3}$ E.	78	49 17	49 15	55 $51\frac{1}{4}$	57 39	61 $8\frac{1}{4}$	
♀ ——— 5.	N. $68\frac{1}{3}$ W.	$18\frac{1}{2}$	49 3	49 4	55 $9\frac{1}{4}$	60 14	60 $27\frac{1}{4}$	Lost the Resolution.
♂ ——— 6.	N. 5 E.	67	47 58	48 0	55 $17\frac{1}{4}$	60 $22\frac{1}{2}$	60 $35\frac{1}{4}$	
○ ——— 7.	S. $68\frac{1}{2}$ E.	145	48 53	48 53	58 $38\frac{1}{4}$	63 6	63 $48\frac{1}{4}$	
☽ ——— 8.	S. 45 E.	$114\frac{1}{2}$	50 14	Cloudy.	60 $43\frac{1}{4}$	65 11	65 $53\frac{1}{4}$	

ON BOARD THE ADVENTURE.

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1773.	Course.	Dist. Miles.	Latitude South by		Longitude East by			Remarks.
			Account.	Observat.	Account.	Observat.	No. 1.	
♂ Feb. 9.	S. 66 E.	10	50 20	50 18	60 59 $\frac{1}{4}$	65 27	66 9 $\frac{1}{4}$	Many penguins.
♀ — 10.	N. 35 $\frac{3}{4}$ E.	31	49 54	49 53	61 27 $\frac{1}{4}$	65 56	67 11 $\frac{1}{4}$	Seals and birds.
♀ — 11.	S. 21 E.	29	50 22	50 18	61 42 $\frac{3}{4}$	66 11	67 30 $\frac{1}{4}$	Red-headed pen- guins.
♀ — 12.	S. 78 $\frac{1}{4}$ E.	11.4	50 41	50 41	64 38 $\frac{1}{4}$	69 6 $\frac{1}{2}$	70 24 $\frac{1}{4}$	
♀ — 13.	S. 78 $\frac{3}{4}$ E.	121	51 5	Cloudy.	67 47 $\frac{1}{4}$	72 7	72 36 $\frac{1}{4}$	
○ — 14.	S. 75 $\frac{1}{2}$ E.	132	51 41	51 39 $\frac{1}{2}$	71 16 $\frac{7}{8}$	75 35	76 23 $\frac{1}{4}$	Seals, whales & birds
♂ — 15.	S. 76 E.	138	52 14	52 13	75 0 $\frac{1}{2}$	79 18	82 1 $\frac{1}{4}$	Ditto and porpoises.
♂ — 16.	S. 76 $\frac{1}{2}$ E.	78	52 32	Cloudy.	77 04 $\frac{1}{4}$	81 22	82 18 $\frac{1}{4}$	
♀ — 17.	S. 79 $\frac{3}{4}$ E.	143	52 55	52 56	80 52 $\frac{1}{4}$	85 10	86 6 $\frac{1}{4}$	
♀ — 18.	N. 88 $\frac{1}{2}$ E.	144	52 51	52 52 $\frac{2}{3}$	84 51 $\frac{1}{2}$	88 52	89 38 $\frac{1}{4}$	Sea-weed.
♀ — 19.	N. 83 $\frac{1}{2}$ E.	148	52 35	52 35	88 58 $\frac{1}{4}$	93 0	93 47 $\frac{1}{4}$	
♀ — 20.	N. 82 E.	146	52 16	52 16	92 53 $\frac{1}{4}$	96 55	97 48	Sea-weed.
○ — 21.	East.	108	52 16	52 14	95 49 $\frac{1}{4}$	99 51	101 5 $\frac{1}{4}$	
♂ — 22.	S. 72 $\frac{1}{2}$ E.	46	52 28	Cloudy.	97 40	101 42 $\frac{3}{4}$	102 57	Saw one ice isle.
♂ — 23.	N. 80 $\frac{3}{4}$ E.	97 $\frac{1}{2}$	52 13	52 17 $\frac{1}{2}$	100 17	104 16 $\frac{3}{4}$	104 58 $\frac{1}{4}$	Sea-weed.
♀ — 24.	N. 83 $\frac{3}{4}$ E.	89	52 8 $\frac{1}{2}$	52 7	102 49 $\frac{1}{4}$	106 49	107 46 $\frac{1}{4}$	
♀ — 25.	N. 78 $\frac{1}{2}$ E.	128	51 40 $\frac{1}{2}$	51 41 $\frac{1}{2}$	106 16 $\frac{1}{4}$	110 16	111 28 $\frac{1}{4}$	
♀ — 26.	N. 81 $\frac{1}{4}$ E.	147	51 18	Cloudy.	109 52 $\frac{1}{2}$	114 2	115 19 $\frac{1}{4}$	
♀ — 27.	N. 78 E.	150	50 47	Cloudy.	113 59 $\frac{1}{4}$	117 59	119 16 $\frac{1}{4}$	
○ — 28.	N. 81 E.	150	50 24	50 24	117 59 $\frac{1}{4}$	121 49	123 9 $\frac{1}{4}$	Rock-weed.
♂ March 1.	N. 53 $\frac{1}{2}$ E.	134	49 04	49 02	120 51 $\frac{1}{4}$	124 41	126 1 $\frac{1}{4}$	
♂ — 2.	N. 52 $\frac{1}{4}$ E.	150	47 29	Cloudy.	123 51 $\frac{1}{4}$	127 41	129 1 $\frac{1}{4}$	Log 48 feet to 29 $\frac{1}{2}$.
♀ — 3.	N. 56 E.	128	46 18	Cloudy.	126 25 $\frac{1}{4}$	130 15	132 10 $\frac{1}{4}$	Sea-weed, and the water discoloured.
♀ — 4.	N. 42 $\frac{1}{2}$ E.	121	44 48	44 48 $\frac{1}{4}$	128 25 $\frac{1}{4}$	132 15	134 20 $\frac{1}{4}$	
♀ — 5.	N. 67 $\frac{3}{4}$ E.	123	44 04	44 3 $\frac{3}{4}$	131 0 $\frac{1}{4}$	136 10	137 17 $\frac{1}{4}$	
♀ — 6.	N. 88 $\frac{1}{2}$ E.	144	43 58	43 47 $\frac{1}{2}$	134 20 $\frac{1}{4}$	139 30	141 0 $\frac{1}{4}$	
○ — 7.	N. 84 $\frac{1}{2}$ E.	9 $\frac{1}{2}$	43 47	43 46 $\frac{1}{2}$	136 30 $\frac{3}{4}$	141 40	143 08 $\frac{1}{4}$	
♂ — 8.	N. 87 E.	110	43 41	43 40 $\frac{3}{4}$	139 02 $\frac{3}{4}$	144 37	145 27 $\frac{1}{4}$	
♂ — 9.	East.	69.6	43 43	43 45 $\frac{2}{3}$	140 39 $\frac{1}{4}$	145 07	147 03 $\frac{1}{4}$	Saw land.
	Mew Stone, off Van Die-		43 48			146 27		
	man's Land							
	The South West Point of		43 38			145 55		
	Van Dieman's Land							
	The South East Point of		43 38			146 59		
	Van Dieman's Land							
	Adventure's Bay, in Van		43 23			147 30		
	Dieman's Land							
♀ — 10.	N. 76 $\frac{3}{4}$ E.	36	43 40	43 40	141 25 $\frac{1}{4}$	147 20	147 57 $\frac{1}{4}$	
♀ — 11.	N. 58 $\frac{1}{2}$ E.	26	43 26	43 23	141 55 $\frac{1}{4}$	147 30	148 46 $\frac{1}{4}$	
♂ — 16.	N. 71 E.	38	43 07 $\frac{1}{2}$	43 08	148 19	148 26	149 33 $\frac{1}{4}$	
♀ — 17.	N. 11 E.	85 $\frac{1}{2}$	41 44	41 44	147 56 $\frac{3}{4}$	148 11 $\frac{1}{2}$	149 41 $\frac{1}{4}$	
♀ — 18.	North.	82	40 22	40 21 $\frac{3}{4}$	147 56	148 08	150 02 $\frac{1}{4}$	
♀ — 19.	N. 17 $\frac{3}{4}$ E.	63	39 21	39 21	148 22	148 33 $\frac{1}{2}$	150 19 $\frac{1}{4}$	
♀ — 20.	East.	77	39 22	39 22 $\frac{1}{3}$	150 01	150 13	152 0 $\frac{1}{4}$	
○ — 21.	N. 85 $\frac{1}{2}$ E.	69 $\frac{1}{2}$	39 16 $\frac{1}{2}$	39 16 $\frac{2}{3}$	151 43	151 43	153 30 $\frac{1}{4}$	
♂ — 22.	S. 78 $\frac{1}{2}$ E.	59	39 28 $\frac{1}{4}$	Cloudy.	152 47	152 58	154 47 $\frac{1}{4}$	
♂ — 23.	N. 73 $\frac{1}{2}$ E.	70	39 8 $\frac{1}{4}$	Cloudy.	154 14	154 25	156 14 $\frac{1}{4}$	

ASTRONOMICAL OBSERVATIONS

1773.	Course.	Dist. Miles.	Latitude South by		Longitude East by		No. 1.	Remarks.
			Account.	Observat.	Account.	Observat.		
8 March 24.	N. 79 E.	58	39 59	38 57½	155 26½	155 37	157 12¼	
24 — 25.	S. 75½ E.	95	39 21	39 20½	157 26½	157 37½	159 04¼	
26.	S. 65 E.	108	40 06	40 6½	159 33	159 44	161 02¼	
27.	S. 83 E.	65.5	40 14	40 14½	160 55	161 06	162 31¼	
28.	East.	20	40 15	40 15½	161 21	161 32	163 12¼	
29.	S. 64½ E.	61	40 42	40 42	162 33	163 07	164 35¾	
30.	S. 72 E.	100	41 13	41 13	164 39	164 49	166 35¾	
31.	S. 77 E.	90	41 33	41 33	166 37	166 47	168 34¾	
1 April 1.	N. 89 E.	80	41 31	41 30½	168 25	168 35	170 22¼	Ship S. of account.
2.	N. 82 E.	97	41 17	Cloudy.	170 35	170 45	172 32¼	
	Cape Farewell, in New Zealand		40 38½			172 11½		
3.	N. 50¾ E.	57	40 41	40 40	171 35	171 45	173 46¼	
4.	N. 66 E.	59½	40 16	40 16	172 45	173 15	175 13¼	
5.	S. 41½ E.	48	40 52	40 52½	173 27	174 07	175 57¼	
6.			41 38					
	Queen Charlotte's Sound, in New Zealand		41 5½			173 55		
	Cape Palliser, in New Zealand		41 35			175 0		
7 June 7.		7	41 3½	41 3½	174 01	174 01	174 01	
8.	S. 39¾ E.	65	41 53½	41 53½	174 51	174 51	174 51	
9.	S. 54 E.	99	42 51½	42 50	176 49	176 49	176 49	
10.	S. 56½ E.	115	43 55½	43 57½	179 7½	179 26	179 16	
11.	S. 56½ E.	87	44 45	Cloudy.	180 47	181 06	181 06	
12.	S. 62½ E.	129	45 46	Cloudy.	183 30	183 49	183 49	
13.	S. 25 E.	47½	46 29	Cloudy.	184 0	184 7½	184 31½	A N. W. swell.
14.	S. 69½ E.	45	46 46	46 43½	185 07	185 14½	185 30½	
15.	East.	37	46 44	46 45½	186 01	186 08	186 24	A N. E. swell.
16.	S. 24½ E.	41	47 26	Cloudy.	186 25	186 32	186 48	Ditto.
17.	N.	58	46 28	46 19½	186 25	186 32	186 48	Ditto.
18.	N. 71¾ E.	96½	45 49	45 49½	188 37	188 44	188 11	Ditto.
19.	N. 66 E.	94	45 11	45 12½	190 39	190 46	189 55½	Sea-weed.
20.	N. 69½ E.	119	44 31	44 30	193 18	193 25	192 34	Log 45½ f. to 29½.
21.	N. 78½ E.	64	44 18	44 17	194 45	194 52	194 6½	Log 48 feet to 29½.
22.	S. 78 E.	68.9	44 31	44 32½	196 25	196 32	195 50	
23.	S. 84¾ E.	55	44 37	44 36½	197 42	197 49	197 13¾	
24.	N. 6¼ E.	56	43 42	Cloudy.	197 45	197 52	197 17	
25.	N. 28 W.	33	43 13	Cloudy.	197 23	197 30	196 55	
26.	N. 7½ W.	9	43 05	43 05½	197 13	196 40	196 34	
27.	North.	42	42 25	42 23½	197 13½	196 30	196 34	
28.	East.	41	42 24	42 23½	198 09½	198 04	197 46	
29.	S. 48½ E.	33	42 46	42 45½	198 44	199 0	198 24	Many whales and birds.
30.	S. 77 E.	62	43 0	42 59½	200 09	200 25	199 36	
1 July 1.	S. 85¾ E.	84	43 06	43 05½	202 03	202 19	201 16	
2.	N. 85¾ E.	65	43 0	42 59½	203 32	203 48	202 56	
3.	S. 76 E.	58	43 14	43 13½	204 52	205 03	204 23	

1773.	Course.	Dist. Miles.	Latitude South by		Longitude East by			Remarks.
			Account.	Observat.	Account.	Observat.	No. 1.	
July 4.	S. 40° E.	56	43 56	43 57 $\frac{1}{4}$	205 42	205 54	205 10	
5.	N. 71 $\frac{1}{2}$ E.	104	43 24	Cloudy.	207 57	208 09	205 01	
6.	N. 20 $\frac{1}{2}$ E.	84	42 05	42 05	208 37	208 17	208 07	
7.	N. 36 $\frac{3}{4}$ E.	60	41 17	41 17 $\frac{1}{2}$	209 25	209 05	209 0	
8.	S. 62 E.	90	41 59 $\frac{1}{2}$	51 57	211 8	210 49	210 52	
9.	S. 62 $\frac{1}{4}$ E.	88	42 38	42 38 $\frac{1}{8}$	212 52	212 33	212 57	Log 48 feet to 29 $\frac{1}{2}$ ".
10.	S. 62 $\frac{1}{4}$ E.	130	43 38	43 38 $\frac{1}{8}$	215 27	215 36	215 46	A Western swell.
11.	N. 85 $\frac{1}{4}$ E.	93	43 30	43 30 $\frac{1}{8}$	217 39	217 23	217 58 $\frac{1}{4}$	
12.	N. 78 $\frac{1}{4}$ E.	82	43 13	43 13 $\frac{1}{4}$	219 31	219 19	299 50	
13.	N. 71 E.	46	42 58	42 57 $\frac{1}{4}$	220 32	220 20	220 56	
14.	N. 82 E.	54	42 50	Cloudy.	221 44	221 32	222 08	
15.	N. 24 $\frac{1}{4}$ W.	18 $\frac{1}{2}$	42 33	Cloudy.	221 35	221 23	221 59	
16.	N. 47 E.	102 $\frac{1}{2}$	41 22 $\frac{1}{2}$	41 23	223 12 $\frac{1}{2}$	223 0 $\frac{1}{2}$	223 55	
17.	N. 43 $\frac{3}{4}$ E.	138	39 42	39 42 $\frac{1}{4}$	225 15	225 04	226 22	A S. W. swell.
18.	N. 10 $\frac{3}{4}$ E.	113	37 51	37 51 $\frac{3}{4}$	225 40	225 29	226 36	Swell from the South.
19.	N. 5 $\frac{1}{2}$ E.	81.3	36 30	36 31	225 50	225 39	226 55	Log 48 feet to 29 $\frac{1}{4}$ ".
20.	N. 2 $\frac{1}{2}$ W.	71	35 19	35 19 $\frac{1}{2}$	225 47	225 36	226 48 $\frac{3}{4}$	
21.	N. 9 $\frac{1}{4}$ W.	154	34 27	Cloudy.	225 19	225 08	226 20	
22.	N. 15 $\frac{1}{2}$ W.	108	31 03	31 03 $\frac{1}{4}$	224 46	224 35	225 34	Log 48 feet to 29 $\frac{1}{4}$ ".
23.	N. 11 $\frac{1}{8}$ W.	104	29 21	29 21 $\frac{1}{4}$	224 24	224 13	225 19	
24.	S. 73 $\frac{1}{4}$ W.	75	29 43	Cloudy.	223 0	222 49	223 55	
25.	S. 86 W.	44 $\frac{1}{2}$	29 46	29 46	222 16	222 05	223 11	
26.	N. 41 E.	70	28 53	28 53 $\frac{1}{4}$	223 09	224 14	224 09	
27.	N. 10 $\frac{1}{4}$ W.	59	27 55	27 55 $\frac{1}{2}$	223 20	225 14	225 10	
28.	N. 67 $\frac{1}{2}$ W.	33	27 42	27 42 $\frac{1}{4}$	222 57	224 39	224 58	
29.	N. 71 $\frac{1}{2}$ W.	41 $\frac{1}{2}$	27 29	27 29 $\frac{1}{2}$	222 13	223 42	224 0	
30.	N. 64 $\frac{1}{4}$ E.	58	27 03	27 03 $\frac{1}{4}$	223 15	224 44	225 17	Tropic birds.
31.	N. 26 E.	48	26 20	26 19 $\frac{1}{4}$	223 40	225 09	225 46 $\frac{1}{2}$	Ditto.
Aug. 1.	N. 33 $\frac{1}{4}$ E.	82	25 10	25 11	224 48	225 57	226 34	
2.	N. 6 $\frac{1}{4}$ E.	118	23 14	23 14 $\frac{1}{8}$	224 42	226 11	226 44	Ship N. E. of account.
3.	N. 14 $\frac{1}{4}$ E.	65	22 11	22 10 $\frac{1}{4}$	224 59	226 59	227 07	Many tropic birds.
4.	N. 10 $\frac{1}{4}$ E.	49	21 21 $\frac{1}{2}$	21 22 $\frac{1}{4}$	225 08	227 10	227 15	Ship N. E. of account.
5.	N. 49 $\frac{1}{4}$ E.	66	20 38	20 39 $\frac{1}{4}$	226 03	227 50 $\frac{1}{4}$	228 32	
6.	N. 33 $\frac{1}{2}$ E.	65	19 44	19 44 $\frac{1}{4}$	226 43	228 35	229 27	
7.	N. 53 $\frac{1}{4}$ W.	85	18 52	18 51 $\frac{1}{4}$	225 29	227 21	228 13	
8.	N. 72 $\frac{1}{4}$ W.	148	18 06	18 04 $\frac{1}{4}$	222 55	224 47	225 35	Log 48 feet to 29 $\frac{1}{2}$ ".
9.	N. 79 W.	116	17 42	17 41 $\frac{1}{4}$	220 51	222 33	223 30	
10.	N. 81 $\frac{1}{4}$ W.	118	17 23	17 23 $\frac{3}{4}$	218 47	220 32	221 26	
	A low island seen this day.			17 24		218 53		
11.	N. 86 $\frac{1}{2}$ W.	117	17 16	17 16 $\frac{3}{4}$	216 44	218 29	219 29	
	A low island seen to-day.			17 6		216 34		
12.	N. 86 $\frac{1}{4}$ W.	98	17 10	17 9 $\frac{1}{4}$	215 02	216 10	217 54	
	Another low island.			17 4		215 31		
13.	S. 86 $\frac{1}{4}$ W.	75	17 15	17 14 $\frac{1}{4}$	213 43 $\frac{1}{2}$	215 11	216 46	
14.	S. 88 $\frac{1}{2}$ W.	110	17 17	17 17 $\frac{1}{2}$	211 48	212 50	215 08	

1773.	Course.	Dist. Miles.	Latitude South by		Longitude East by			Remarks.
			Account.	Observat.	Account.	Observation.	No. 1.	
	Osnaburg Island.			17 49 $\frac{1}{2}$		211 47		
○ Aug. 15.	S. 74 W.	106	17 46	17 46 $\frac{1}{2}$	210 03	211 05	213 28	
D — 16.	West.	44		17 46	209 17	210 42	212 40	
	Oaitipeha Bay, in Otaheite.			17 45		210 36 $\frac{1}{2}$		
	Point Venus, in Otaheite.			17 29 $\frac{1}{4}$		210 27 $\frac{1}{2}$		
24 Sept. 2.	N. 57 W.	50		16 59 $\frac{1}{4}$	209 38 $\frac{1}{2}$			
	Owharre Bay, in Huaheine.			16 45		209 0		
	Ohamaneno Harbour, in } Uliatea.			16 45 $\frac{1}{3}$		208 34 $\frac{9}{10}$		
♀ — 17.				16 50 $\frac{1}{2}$	208 11	208 11	208 03	
h — 18.	S. 68 $\frac{1}{2}$ W.	71	17 16	17 15 $\frac{7}{8}$	207 02	207 02	206 43	
○ — 19.	S. 69 $\frac{2}{3}$ W.	67	17 40	17 39 $\frac{3}{4}$	205 54	205 54	205 30	
D — 20.	S. 70 $\frac{1}{4}$ W.	62	18 01	18 01 $\frac{2}{3}$	204 50	204 50	204 35	
♂ — 21.	S. 65 $\frac{1}{3}$ W.	53	18 22 $\frac{1}{2}$	18 23 $\frac{1}{4}$	204 0	204 25	203 39	
♀ — 22.	S. 72 $\frac{1}{4}$ W.	51	18 39 $\frac{2}{3}$	18 39 $\frac{2}{3}$	203 06	203 31	202 44	
24 — 23.	S. 73 $\frac{1}{2}$ W.	93	19 05	19 5 $\frac{7}{8}$	201 33	201 58	201 11	
	Hervey's Islands.			19 16		201 50		
♀ — 24.	S. 74 $\frac{1}{4}$ W.	82	19 28	19 28 $\frac{1}{2}$	200 10	200 20	199 38	
h — 25.	S. 79 $\frac{1}{3}$ W.	119	19 52	19 52 $\frac{1}{3}$	198 06	197 40	197 38	
○ — 26.	S. 75 $\frac{1}{2}$ W.	128	20 24	20 25	195 52	195 26	195 43	
D — 27.	S. 83 $\frac{3}{4}$ W.	129	20 38	20 39 $\frac{1}{4}$	193 35 $\frac{2}{3}$	193 09 $\frac{1}{3}$	193 26 $\frac{2}{3}$	Log 48 feet to 29'' $\frac{1}{2}$.
♂ — 28.	S. 80 $\frac{1}{3}$ W.	146	21 04	21 03 $\frac{7}{8}$	190 58 $\frac{1}{10}$	190 32 $\frac{1}{10}$	190 49 $\frac{1}{10}$	
♀ — 29.	S. 77 $\frac{2}{3}$ W.	110	21 28 $\frac{1}{2}$	21 28 $\frac{1}{3}$	189 01 $\frac{1}{10}$	188 35 $\frac{1}{10}$	189 40	
24 — 30.	N. 83 W.	136	21 12	21 11 $\frac{7}{8}$	186 35	186 09	187 15	
♀ Oct. 1.	S. 84 $\frac{1}{3}$ W.	83	21 20 $\frac{1}{2}$	21 20 $\frac{1}{3}$	185 06	184 40	185 59 $\frac{1}{3}$	
	Anchoring Place of Tongatabu.			21 4 $\frac{1}{2}$		185 10		
♀ — 8.	S. 11 $\frac{1}{4}$ W.	58	22 01	22 01 $\frac{1}{2}$	185 03	185 03	184 23	
h — 9.	S. 52 $\frac{1}{4}$ W.	36	22 25	22 25 $\frac{1}{2}$	185 36	185 28	184 54	
	Pylestaart Island.			22 22 $\frac{1}{2}$		184 25		
○ — 10.	S. 66 $\frac{1}{2}$ W.	50	22 45	22 45 $\frac{1}{4}$	184 47	184 15	183 38	
D — 11.	S. 42 $\frac{1}{4}$ W.	93	23 54	23 53 $\frac{1}{4}$	183 39	183 0	182 32	Ship S. W. of Account.
♂ — 12.	S. 28 W.	110	25 31	25 30 $\frac{3}{4}$	182 42	181 43	181 31	Log 48 feet to 29'' $\frac{1}{2}$.
♀ — 13.	S. 22 $\frac{1}{2}$ W.	110	27 11	27 11 $\frac{1}{2}$	181 55	180 56	180 40	Many Albatrosses.
24 — 14.	S. 22 $\frac{1}{2}$ W.	97	28 42	Cloudy.	181 13	180 14	180 0	
♀ — 15.	S. 14 W.	96	30 15	30 15 $\frac{2}{3}$	180 46	179 47	179 25	Many Albatrosses.
h — 16.	S. 2 $\frac{1}{2}$ W.	84	31 38	31 38 $\frac{1}{2}$	180 44	179 45	179 23	Many Porpoises.
○ — 17.	S. 10 $\frac{1}{2}$ E.	67	32 43	32 43 $\frac{1}{3}$	180 57	179 58	179 27	
D — 18.	S. 6 $\frac{1}{2}$ E.	65	33 47	33 47 $\frac{3}{4}$	181 05	180 05	179 34 $\frac{1}{2}$	
♂ — 19.	S. 5 $\frac{1}{2}$ E.	128 $\frac{1}{2}$	35 54	35 54 $\frac{1}{3}$	181 21	180 21	179 50 $\frac{1}{3}$	
♀ — 20.	S. 6 $\frac{1}{4}$ W.	111 $\frac{1}{2}$	37 45	37 44 $\frac{2}{3}$	181 06	179 45	179 30	
24 — 21.	S. 24 $\frac{1}{4}$ W.	90	39 06	39 06 $\frac{3}{4}$	180 19	178 26	178 10	Saw N. Zealand.
♀ — 22.	S. 53 $\frac{1}{2}$ W.	114.4	40 15	40 15 $\frac{1}{8}$	178 20	176 30	176 31	
h — 23.	S. 28 $\frac{2}{3}$ W.	44	40 53	40 53 $\frac{2}{3}$	177 56	176 05	176 14	
○ — 24.	S. 36 W.	47	41 31	41 31	177 19	175 28	175 40	
D — 25.	S. 30 W.	52	42 16	42 16	176 49	174 58	175 10	
♂ — 26.	S. 36 W.	21	42 33	42 32 $\frac{4}{5}$	176 38	174 42	174 48	

ON BOARD THE ADVENTURE.

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1773.	Course.	Dist. Miles.	Latitude South by		Longitude East by			Remarks.
			Account.	Observat.	Account.	Observat.	No. 1.	
8 Oct. 27.	S. 22 $\frac{1}{2}$ W.	17	42 17	42 17 $\frac{2}{3}$	176 29	174 33	174 39	
24 — 28.	Eaft.	27	42 18	42 18 $\frac{1}{2}$	177 06	175 10	174 50	
2 — 29.	N. 31 $\frac{1}{2}$ E.	32.6	41 50	41 50 $\frac{3}{4}$	177 29	175 33	175 0	
2 — 30.	S. 45 W.	4	41 53	41 53 $\frac{3}{4}$	177 25	175 29	174 56	
2 — 31.	S. 12 $\frac{1}{2}$ E.	40	42 32	42 32	177 37	175 41	175 08	
2 Nov. 1.	S. 8 $\frac{1}{2}$ E.	20 $\frac{1}{2}$	42 52	Cloudy.	177 41	175 45	175 12	
2 — 2.	N. 7 $\frac{1}{2}$ E.	65 $\frac{1}{2}$	41 37	41 37 $\frac{3}{4}$	177 56	176 0	175 06	
2 — 3.	N. 52 $\frac{1}{2}$ W.	28	41 20	41 20 $\frac{1}{2}$	177 26	175 30	175 04	
24 — 4.	S. 53 $\frac{3}{4}$ W.	21	41 36	41 36	176 56	175 0	174 05	
2 — 5.	S. 34 $\frac{1}{2}$ E.	19	41 49	Cloudy.	177 05	175 09	174 14	
2 — 6.	N. 61 $\frac{7}{8}$ E.	25.8	41 37	41 37 $\frac{1}{2}$	177 53	175 57	175 02	
2 — 7.	N. 30 $\frac{1}{2}$ E.	135	39 41	39 41 $\frac{1}{2}$	179 21	177 25	176 30	
2 — 8.	N. 21 $\frac{1}{2}$ E.	41	39 03	39 01 $\frac{1}{2}$	179 47	177 51	176 56	
2 — 9.					179 36	177 40		
Tolaga Bay, New Zealand.			38 21 $\frac{1}{2}$	38 21 $\frac{1}{2}$	178 37 $\frac{1}{2}$	178 37 $\frac{1}{2}$	177 02 $\frac{1}{2}$	
2 — 16.	S. 20 $\frac{1}{2}$ W.	75	39 43	39 42	178 07 $\frac{1}{2}$	178 07 $\frac{1}{2}$	176 27	
24 — 17.	S. 45 W.	24	39 59	39 59	177 45	177 44 $\frac{1}{2}$	176 08	
2 — 18.	S. 39 W.	48	40 38 $\frac{1}{2}$	40 39 $\frac{3}{4}$	177 09	177 08 $\frac{1}{2}$	175 32	
2 — 19.	S. 48 $\frac{1}{2}$ W.	36	41 03	41 02 $\frac{7}{8}$	176 33	176 18	175 02	
2 — 20.	S. 89 $\frac{1}{2}$ W.	22	41 05	41 05	176 08	175 53	174 37	
2 — 21.	Eaft.	17	41 04	41 04 $\frac{1}{2}$	176 32	176 25	175 37	
2 — 22.	N. 67 $\frac{1}{2}$ W.	20	40 54	40 54 $\frac{1}{2}$	176 08	175 53	175 07	
2 — 23.	S. 36 $\frac{1}{2}$ W.	52	41 36	41 36 $\frac{1}{4}$	175 28	175 13	174 27	
24 — 24.							173 30	
2 — 25.							173 21	
2 — 26.								
2 — 27.				41 57 $\frac{3}{4}$				
2 — 28.								
2 — 29.				42 06 $\frac{5}{8}$			173 22	
Queen Charlotte's Sound.			41 5 $\frac{3}{4}$	42 25 $\frac{1}{8}$	175 10	175 10	175 13	
24 Dec. 23.	S. 12 $\frac{3}{4}$ W.	36	43 0	43 0 $\frac{1}{2}$	175 0	175 0	175 0	
2 — 24.	S. 22 $\frac{2}{3}$ E.	107	44 39	44 39	175 56	175 56	175 59	Log 48 feet to 29 $\frac{1}{2}$.
2 — 25.	S. 34 $\frac{2}{3}$ E.	79	45 44	45 42 $\frac{7}{8}$	176 59	176 59	176 57	Many grampusses.
2 — 26.	S. 36 $\frac{1}{2}$ E.	52 $\frac{1}{2}$	46 25	Cloudy.	177 44	177 44	177 42 $\frac{1}{2}$	Many seals.
2 — 27.	S. 39 $\frac{1}{2}$ E.	52	47 06	Cloudy.	178 32 $\frac{1}{2}$	178 32 $\frac{1}{2}$	178 31	Many birds.
2 — 28.	S. 16 $\frac{1}{2}$ E.	64	48 07	48 07 $\frac{3}{8}$	178 57 $\frac{1}{2}$	178 57 $\frac{1}{2}$	178 51	Many birds and seals.
2 — 29.	S. 17 E.	90	49 33	Cloudy.	179 37	179 37	179 31	The ship S. E. of Acc.
2 — 30.	S. 8 E.	64	50 36	Cloudy.	179 50	179 50	179 44	Pengwins, drift-wood, rock-weed, and seals.
1774.								
2 Jan. 1.	S. 70 $\frac{1}{2}$ E.	36	50 48	50 56 $\frac{7}{8}$	180 44	180 44	180 55 $\frac{1}{2}$	Ship S. of Acc.
2 — 2.	S. 65 $\frac{1}{2}$ E.	97	51 38	51 36 $\frac{2}{3}$	183 01	183 01	183 12	Log 48 feet to 29 $\frac{1}{2}$
2 — 3.	S. 50 $\frac{2}{3}$ E.	148	53 11	Cloudy.	186 8 $\frac{1}{2}$	186 8 $\frac{1}{2}$	186 19 $\frac{1}{2}$	Saw seals.
2 — 4.	S. 50 $\frac{2}{3}$ E.	142	54 41	Cloudy.	189 15 $\frac{1}{2}$	189 15 $\frac{1}{2}$	189 26 $\frac{1}{2}$	
2 — 5.	S. 64 $\frac{3}{4}$ E.	121	55 29	55 28 $\frac{1}{2}$	192 27 $\frac{1}{2}$	192 54	192 42	Whales.
24 — 6.	S. 62 E.	124	56 27	Cloudy.	195 41	196 07 $\frac{1}{2}$	195 55 $\frac{1}{2}$	Saw rock-weed.
2 — 7.	S. 76 E.	122	56 56	Cloudy.	199 19	199 42 $\frac{1}{2}$	199 30 $\frac{1}{2}$	

1774.	Course.	Dist.	Latitude South by		Longitude East by			Remarks.
			Account.	Observat.	Account.	Observation.	No. 1.	
		Miles.						
h Jan. 8.	S. 83 $\frac{1}{2}$ E.	91	57 6 $\frac{1}{2}$	57 5 $\frac{3}{4}$	202 06	202 42 $\frac{1}{2}$	202 47	
o — 9.	S. 77 $\frac{3}{4}$ E.	108	57 29	57 28 $\frac{2}{3}$	205 25	206 01 $\frac{1}{2}$	206 06	Many whales and birds.
D — 10.	S. 73 E.	94	57 56	Cloudy.	208 11 $\frac{1}{2}$	208 48	208 52 $\frac{1}{2}$	
h — 11.	S. 79 $\frac{2}{3}$ E.	124	58 18	58 18	212 10	212 46	212 51 $\frac{1}{2}$	Three Ice Islands.
h — 12.	S. 74 $\frac{1}{3}$ E.	86	58 40 $\frac{1}{2}$	58 40 $\frac{2}{3}$	214 43	215 20	215 57 $\frac{1}{2}$	Several Ice Islands.
u — 13.	S. 83 E.	41	58 45 $\frac{1}{2}$	58 45 $\frac{2}{3}$	216 2	216 39	217 16	Ditto.
h — 14.	East.	37	58 46	Cloudy.	217 13	217 50	218 27	
h — 15.	S. 86 $\frac{1}{2}$ E.	123	58 48	58 48 $\frac{3}{4}$	221 11	221 48	223 02	
o — 16.	S. 89 E.	120	58 50	58 50 $\frac{3}{4}$	225 03	225 40	226 54	Much ice.
D — 17.	S. 82 $\frac{3}{4}$ E.	118	59 05	59 5 $\frac{1}{4}$	228 54	229 31	232 08	Log 48 f. to 29 $\frac{1}{4}$.
h — 18.	S. 87 $\frac{2}{3}$ E.	155	59 11	59 11	234 0	234 37	237 29	Saw rock-weed.
h — 19.	S. 84 $\frac{1}{4}$ E.	136	59 25	59 24 $\frac{4}{5}$	238 26	241 05	241 43 $\frac{1}{2}$	A western swell.
u — 20.	S. 78 $\frac{1}{4}$ E.	140	59 52	59 52 $\frac{1}{4}$	243 0	245 39	246 17 $\frac{1}{2}$	
h — 21.	S. 68 E.	44	60 09	60 09 $\frac{3}{4}$	244 26	247 20	248 05	A N. W. swell.
h — 22.	N. 55 E.	66	59 31	59 31	246 13	249 07	250 06	A S. W. swell.
o — 23.	N. 79 $\frac{1}{3}$ E.	86	59 15	59 15 $\frac{1}{2}$	249 0	251 54	252 54	Ditto.
D — 24.	S. 81 E.	108	59 33	59 33 $\frac{1}{3}$	252 32	255 26	257 02	Ditto.
h — 25.	S. 69 $\frac{3}{4}$ E.	130	60 18	Cloudy.	256 36	259 30	261 06	Many birds.
h — 26.	S. 74 E.	108	60 48	Cloudy.	260 08	263 02	264 33	
u — 27.	S. 77 E.	110	61 13	Cloudy.	263 51	266 45	268 16 $\frac{1}{2}$	A N. W. swell.
h — 28.	S. 74 E.	120	61 34	61 34 $\frac{2}{3}$	267 26	270 50	273 49	Ditto.
h — 29.	S. 87 $\frac{1}{4}$ E.	134	61 50	61 50	272 40	275 34	278 34	Ditto.
o — 30.	N. 83 $\frac{3}{4}$ E.	146	61 34	61 34 $\frac{2}{3}$	277 46	280 40	284 03	Porpoises and birds.
D — 31.	N. 86 E.	130	61 20 $\frac{2}{3}$	Cloudy.	282 17	288 17	289 17	Ditto.
h Feb. 1.	N. 82 $\frac{1}{2}$ E.	110	61 10	61 10 ::	208 04	292 04	292 21	A westerly swell.
h — 2.	N. 79 E.	130	60 45	60 44 $\frac{2}{3}$	290 28	296 28	298 15	Ditto.
u — 3.	N. 86 $\frac{3}{4}$ E.	145	60 36	60 36 $\frac{1}{2}$	295 21	302 47	303 17 $\frac{3}{4}$	Ditto.
h — 4.	N. 88 $\frac{1}{4}$ E.	126	60 32	Cloudy.	299 40	307 06	307 36 $\frac{1}{2}$	Birds innumerable.
h — 5.	N. 83 $\frac{3}{4}$ E.	116	60 18	Cloudy.	303 32	310 58	311 28 $\frac{1}{2}$	A N. W. swell.
o — 6.	N. 70 $\frac{1}{4}$ E.	42 $\frac{1}{2}$	60 04	Cloudy.	304 53	312 19	312 49 $\frac{1}{2}$	Many Ice Islands.
D — 7.	N. 35 $\frac{1}{4}$ E.	57	59 17	59 17 $\frac{2}{3}$	305 58 $\frac{1}{2}$	313 24 $\frac{1}{2}$	314 54	Many birds: Ice.
h — 8.	N. 52 $\frac{1}{4}$ E.	76	58 30	58 30	307 54	315 20	317 20	The westerly swell
h — 9.	N. 53 $\frac{3}{4}$ E.	118	57 20	57 20 ::	310 52.7	318 18.7	320 18.7	continues.
u — 10.	N. 68 $\frac{1}{2}$ E.	60	56 58	56 58	312 37.1	320 03.1	322 03	Many Penguins.
h — 11.	N. 65 E.	84	56 22	Cloudy.	314 58.2	322 24.2	324 24.1	Red-headed Peng.
h — 12.	N. 41 E.	71 $\frac{1}{2}$	55 28	Cloudy.	316 21.7	323 47.7	325 47.6	Birds.
o — 13.	N. 56 E.	90	54 38	Cloudy.	318 30.7	325 57.7	327 56.6	Yet a westerly swell.
D — 14.	N. 77 E.	71	54 22	Cloudy.	320 33.2	327 59.2	329 59.1	Many seals: Ice.
h — 15.	N. 84 E.	106	54 11	Cloudy.	323 33.2	330 59	332 59	Some seals.
h — 16.	N. 79 $\frac{1}{2}$ E.	46	54 02	54 02 ::	324 50.2	332 16.2	336 9	No. westerly swell.
u — 17.	S. 85 $\frac{1}{3}$ E.	99	54 10	Cloudy.	327 38	335 04	338 57	Sea-weed and porpoises.
h — 18.	East.	46	54 12	54 12 ::	328 57	336 23	340 16	Swell from the N.
h — 19.	N. 78 $\frac{1}{2}$ E.	60	54 0	54 0	330 38	338 04	341 57	Swell from N.N.W.
o — 20.	N. 66 $\frac{2}{3}$ E.	93	53 20	53 20	333 01	340 27	343 56	Sea-weeds, birds and ice.
D — 21.	S. 88 $\frac{1}{4}$ E.	108	53 24	53 23 $\frac{3}{4}$	336 02.3	343 28	346 50	Seals, porpoises and ice.
h — 22.	N. 81 $\frac{3}{4}$ E.	92	53 11	53 11 $\frac{2}{3}$	338 34	349 37	349 32 $\frac{1}{2}$	S. W. swell: Ice.

ON BOARD THE ADVENTURE.

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1774.	Course.	Dist. Miles.	Latitude South by		Longitude East by			Remarks.
			Account.	Observat.	Account.	Observat.	No. 1.	
8 Feb. 23.	N. 86 E.	107	53 04	Cloudy.	341 31	352 34	352 29½	A Western swell: ice.
14 — 24.	N. 80½ E.	101	52 46	52 46½	344 19	355 22	355 43	Ditto.
9 — 25.	S. 74½ E.	109.8	53 16	53 16	347 14	358 17	358 38	Ditto.
12 — 26.	S. 79½ E.	100	53 35	Cloudy.	349 58	0 03	1 09	Ditto.
Having made a complete revolution round the Globe, Mr. Bayley here rejected 360°, and repeated 12, February 26, to make his day correspond with the day at Greenwich.								
12 — 26.	N. 85½ E.	110	53 27	53 27	353 3	3 08	4 09½	Porpoises and ice.
13 — 27.	S. 71½ E.	86	53 54	53 53½	355 22	5 27	6 28½	Penguins and ice.
14 — 28.	S. 58½ E.	19	54 03	Cloudy.	355 48	5 52½	6 54	Several ice islands.
1 March 1.	N. 73 E.	67	53 44	Cloudy.	357 36	7 41	9 19	Seals and birds.
2 — 2.	S. 75½ E.	79	54 04	54 04½	359 46	9 51	11 28	Ice.
3 — 3.	N. 52 E.	76	53 17	53 17½	1 27	11 40	13 20	Whales and porpoises.
4 — 4.	N. 8½ W.	36½	52 42	Cloudy.	1 18	11 31	13 11	A Western swell yet.
5 — 5.	N. 19½ E.	124	50 45	50 44½	2 26	12 39	14 44	Ship N.E. of acct.
6 — 6.	N. 56½ E.	88	49 55	Cloudy.	4 17	14 30	16 35	Many porpoises.
7 — 7.	N. 4½ E.	83	48 32	48 32½	4 26	14 01½	16 48	Ice and sea-weed.
8 — 8.	N. 15 W.	57	47 36½	47 36½	4 03	13 52	16 40	Some ice islands.
9 — 9.	N. 12 E.	119	45 41	Cloudy.	4 39	14 27½	17 12½	
10 — 10.	N. 8 E.	148	43 14	43 13½	5 07	14 50	17 35	The Western swell yet.
11 — 11.	N. 15 W.	89	43 48	41 48½	4 36	14 19	17 04	
12 — 12.	N. 19 E.	33½	41 16	Cloudy.	4 51	14 34	17 33	
13 — 13.	N. 19½ E.	84	39 59	39 59	5 23	15 14	18 13	
14 — 14.	N. 13½ E.	152	37 32	37 32½	6 07.7	16 04	18 56½	
15 — 15.	North.	121	35 32	35 31½	6 07.7	16 47	18 54	
16 — 16.	N. 11½ E.	55½	34 37	34 37½	6 21.3	16 51	19 14	Ship N.W. of acct.
17 — 17.	N. 63 E.	53	34 13	34 12½	7 19.3	17 42	20 17½	
Cape of Good Hope.				33 55½		18 22½		
1 April 17.	N. 45 W.	60	33 13	33 12½	17 31	17 31	17 29½	
18 — 18.	N. 51½ W.	37	32 49	Cloudy.	16 54	16 54	16 52½	
19 — 19.	S. 70½ W.	46	33 4½	33 4½	16 07	16 07	16 12	Log 48 f. to 29"¼.
20 — 20.	N. 3 E.	31	32 34	32 33½	16 09	16 07	16 14	
21 — 21.	N. 48½ W.	120	31 13	31 13½	14 22	14 22	14 23	
22 — 22.	N. 50½ W.	90	30 16	30 16½	13 02	13 0	13 07	
23 — 23.	North.	60	29 15	29 14½	13 02	13 23½	13 08	Drift-wood.
24 — 24.	N. 47 W.	133	27 44	27 44½	11 21	11 43	11 27	
25 — 25.	N. 51½ W.	146	26 13	26 13½	9 14	9 36	9 17	
26 — 26.	N. 39 W.	97	24 57	24 57½	8 05	8 28	8 04	Ship N.W. of acct.
27 — 27.	N. 44 W.	97	23 48	23 47½	6 49	7 12	6 30	
28 — 28.	N. 40½ W.	77	22 49	22 49½	5 56	6 19	5 42	
29 — 29.	N. 45 W.	79	21 53	21 53	4 55	5 18	4 17	Many porpoises and birds.
30 — 30.	N. 52 W.	51	21 21½	21 21½	4 11½	3 31.2	3 37	A Western swell.
1 May 1.	N. 46 W.	43	20 51	20 51½	3 38½	2 40½	2 54	
2 — 2.	N. 43½ W.	40	20 22	20 22½	3 09	1 57	2 23½	
3 — 3.	N. 37 W.	63	19 32	19 32½	2 28	1 13	1 54	
4 — 4.	N. 70 W.	16	19 27	19 27½	2 12	0 50	1 42	
5 — 5.	N. 50½ W.	63	18 47	18 47½	1 21½	0 0	0 55	Log 48 feet to 29"¼.

1774.	Course.	Dist. Miles.	Latitude South by		Longitude East by			Remarks.
			Account.	Observat.	Account.	Observat.	No. 1.	
♀ May 6.	N. 49 W.	101	17 41	17 41	0 02 $\frac{3}{4}$ West.	1 29 West.	0 37 West.	
h — 7.	N. 51 $\frac{1}{2}$ W.	84	16 49	16 49 $\frac{1}{2}$	1 05 $\frac{1}{4}$	2 37	1 45	
o — 8.	N. 44 W.	84 $\frac{1}{2}$	15 48	15 48 $\frac{1}{2}$	2 06 $\frac{1}{4}$	3 38	2 49 $\frac{3}{4}$	
D — 9.	N. 45 W.	84	14 49	Cloudy.	3 07 $\frac{1}{4}$	4 54	4 05	
♂ — 10.	N. 48 $\frac{3}{4}$ W.	130	13 23	13 23 $\frac{1}{4}$	4 47 $\frac{1}{2}$	6 34.3	5 42	
♀ — 11.	N. 48 $\frac{3}{4}$ W.	123	12 02	12 02 $\frac{1}{4}$	6 21.7	8 08.5	7 19	Flying fish and dolphins.
u — 12.	N. 44 W.	110	10 43	10 43	7 39.1	9 25.9	8 36	
♀ — 13.	N. 46 $\frac{1}{4}$ W.	128	9 14	9 14 $\frac{1}{8}$	9 13	10 59	10 06	
h — 14.	N. 49 $\frac{1}{2}$ W.	120	7 55	7 55 $\frac{1}{2}$	10 45	12 17	11 42.7	Log 48 f. to 29 $\frac{1}{4}$.
o — 15.	N. 49 $\frac{1}{2}$ W.	126	6 33	6 33 $\frac{1}{2}$	12 21	14 15	13 11	
D — 16.	N. 47 $\frac{1}{2}$ W.	117	5 14	5 14 $\frac{1}{2}$	13 47 $\frac{1}{2}$	15 46	14 40	
♂ — 17.	N. 47 $\frac{3}{4}$ W.	110	4 0	4 0 $\frac{1}{2}$	15 07 $\frac{1}{2}$	17 10	16 0	
♀ — 18.	N. 44 $\frac{1}{4}$ W.	118	2 35	2 35 $\frac{1}{2}$	16 29 $\frac{1}{2}$	19 02	17 37	Ship S. E. of acct.
u — 19.	N. 26 W.	108	0 58 North.	0 58 $\frac{3}{4}$ North.	17 16	19 55	18 44	
♀ — 20.	N. 20 W.	85	0 21	0 21 $\frac{1}{2}$	17 46	20 35	19 16	
h — 21.	N. 22 W.	68	1 24	1 24 $\frac{3}{4}$	18 12	21 0	20 21	
o — 22.	N. 19 W.	95	2 54	2 54 $\frac{1}{2}$	18 43	21 31	21 17	
D — 23.	N. 22 W.	76 $\frac{1}{2}$	4 05	4 05	19 12	22 0	21 55	Log 48 f. to 29".
♂ — 24.	N. 27 W.	36	4 36	4 36 $\frac{3}{4}$	19 28	22 17	21 59	
♀ — 25.	North.	50	5 27	5 27 $\frac{1}{8}$	19 28	22 17	21 50	Ship N. of account.
u — 26.	N. 50 W.	45	5 56	5 56	20 03	22 52	21 55	Swell from N. E.
♀ — 27.	N. 84 W.	30	5 59	5 59 $\frac{1}{4}$	20 33	24 34	21 59	Ship W. of acct.
h — 28.	N. 45 W.	31	6 21	6 21 $\frac{1}{2}$	20 54	24 55	22 14	Ship S. W. of acc.
o — 29.	N. 51 W.	26	6 38	6 37 $\frac{3}{4}$	21 15	25 18	22 35	
D — 30.	N. 80 $\frac{1}{4}$ E.	18	6 41	Cloudy.	20 57	25 0	22 47	
♂ — 31.	S. 75 $\frac{1}{4}$ W.	4	6 37	6 36 $\frac{3}{4}$	21 17	25 20	21 24 $\frac{1}{2}$	
♀ June 1.	N. 35 E.	11	6 48	6 47 $\frac{7}{8}$	21 07	24 57	21 18	
u — 2.	N. 61 $\frac{2}{3}$ W.	39	7 07	7 07 $\frac{1}{2}$	21 44	25 37 $\frac{1}{2}$	21 19	
♀ — 3.	N. 85 W.	38	7 11	7 11	22 22	25 50	22 07	
h — 4.	N. 58 $\frac{3}{4}$ W.	54	7 39	7 39 $\frac{1}{8}$	23 08	26 45	22 54	
o — 5.	N. 55 W.	34 7	7 59	7 59 $\frac{1}{4}$	23 38	27 15 $\frac{1}{2}$	23 37 $\frac{1}{2}$	
D — 6.	N. 69 W.	41	8 14	8 14	24 17	27 54	24 0	
♂ — 7.	N. 43 $\frac{1}{4}$ W.	84	9 15	9 14 $\frac{3}{4}$	25 15	28 51	25 08	
♀ — 8.	N. 44 W.	103	10 29	10 28 $\frac{3}{4}$	26 30	30 06	26 28	Ship N. W. of acct.
u — 9.	N. 39 $\frac{1}{2}$ W.	106	11 51	11 51 $\frac{1}{2}$	27 36	31 12	27 38	Ditto.
♀ — 10.	N. 42 $\frac{1}{4}$ W.	117	13 18	13 18 $\frac{1}{4}$	28 56	32 31	28 59	Log 48 feet to 29".
h — 11.	N. 43 W.	115	14 42	14 42	30 16	33 51	30 11	
o — 12.	N. 25 $\frac{3}{4}$ W.	112	16 23	16 23 $\frac{1}{2}$	31 05	34 44	31 28	Log 48 f. to 28 $\frac{3}{4}$.
D — 13.	N. 25 W.	89	17 44	17 44 $\frac{1}{2}$	31 44	35 37	32 21	
♂ — 14.	N. 15 W.	92	19 13	19 13 $\frac{1}{2}$	32 09	36 16	32 29 $\frac{3}{4}$	
♀ — 15.	N. 12 $\frac{1}{4}$ W.	98	20 49	20 49 $\frac{2}{3}$	32 30	36 38	33 11	
h — 16.	N. 21 $\frac{1}{2}$ W.	100	22 22	22 21 $\frac{7}{8}$	33 10	37 29	33 56 $\frac{1}{2}$	
♀ — 17.	N. 24 $\frac{1}{4}$ W.	91	23 45	23 45 $\frac{1}{2}$	33 50 $\frac{1}{2}$	38 23	34 47 $\frac{1}{2}$	
h — 18.	N. 12 W.	86	25 09	25 09 $\frac{1}{2}$	34 10	39 09	35 09	Sea-weed.

1774.	Course.	Dist. Miles.	Latitude North by		Longitude West by		No.	Remarks.
			Account.	Observat.	Account.	Observat.		
○ June 19.	N. $7\frac{3}{4}$ W.	85	26 33	26 $33\frac{3}{4}$	34 21	39 11	35 20	Ship N. E. of Acc.
○ — 20.	N. 7 E.	87	28 0	28 $0\frac{1}{2}$	34 11	38 58	35 06	Sea-weed.
♂ — 21.	N. 6 E.	78	29 17	29 $17\frac{1}{2}$	34 02	39 24	35 37	Ship N. E. of Acc.
♀ — 22.	N. 8 W.	99	30 55	30 55	34 18	39 36	35 24	
♂ — 23.	N. $13\frac{1}{2}$ W.	107	32 39	32 $39\frac{1}{2}$	34 46	40 04	35 38	Ship N. of Account.
♀ — 24.	N. $12\frac{1}{2}$ W.	106	24 23	24 $23\frac{1}{2}$	35 10	40 29	36 12	Ship N. E. of Acc.
♂ — 25.	North.	93	35 56	35 $56\frac{1}{2}$	35 10	40 29	36 $02\frac{1}{2}$	Log 50 feet to 29".
○ — 26.	N. $12\frac{1}{2}$ E.	78	37 12	37 $11\frac{3}{4}$	34 52	40 21	35 54	Log 48 feet to 29".
○ — 27.	N. $50\frac{1}{2}$ E.	54	37 45	37 $45\frac{1}{2}$	34 03	39 32	35 06	Ship S. W. of Acc.
♂ — 28.	N. 70 E.	24	37 53	37 $53\frac{1}{2}$	33 38	40 10	34 18	Ship S. E. of Acc.
♀ — 29.	N. $36\frac{1}{2}$ E.	58	38 40	38 $40\frac{1}{2}$	32 54	39 40	33 36	Ship N. E. of Acc.
♂ — 30.	N. $50\frac{1}{2}$ E.	52	39 13	39 13	32 02	39 0	32 30	Ship S. W. of Acc.
♀ July 1.	N. $58\frac{1}{2}$ E.	100	40 06	40 $06\frac{1}{2}$	30 11	37 24	30 40	Ship ditto.
♂ — 2.	N. $53\frac{1}{2}$ E.	75	40 50	40 51	28 42	35 55	29 10	
○ — 3.	N. $40\frac{3}{4}$ E.	51	41 32	41 $32\frac{1}{2}$	27 53	35 02	27 42	
♂ — 4.	N. 58 E.	134	42 44	42 44	25 19	32 $32\frac{3}{4}$	25 $06\frac{1}{2}$	
♂ — 5.	N. $53\frac{1}{2}$ E.	135	44 01	44 01	22 43	29 $56\frac{3}{4}$	22 39	Log 48 feet to 29".
♀ — 6.	N. $47\frac{1}{2}$ E.	153	45 45	45 45	20 04	27 18	19 50	A W.S.W. swell.
♂ — 7.	N. $58\frac{1}{2}$ E.	161	47 10	47 10	16 44	23 58	16 27	Ditto.
♀ — 8.	N. $67\frac{1}{2}$ E.	141	48 05	48 $05\frac{1}{2}$	13 27	20 41	13 24	Ditto.
♂ — 9.	N. $61\frac{1}{2}$ W.	144	49 09	49 09	10 05	17 19	10 $07\frac{3}{4}$	
○ — 10.	N. $84\frac{1}{2}$ E.	134	49 22	49 $21\frac{3}{4}$	6 41	13 55	6 41	
♂ — 11.	N. $86\frac{1}{2}$ E.	94	49 27	49 $27\frac{1}{2}$	4 17	11 31	4 07	Had soundings 80 fathom.
♂ — 12.	N. $86\frac{3}{4}$ E.	137	49 35	49 $35\frac{1}{2}$	0 47.7 East.	8 01	0 05 East.	Log 48 feet to 29".
♀ — 13.	N. 79 E.	164	50 06	50 $06\frac{1}{2}$	1 53	5 20	2 50	Ram Head N. W. about 6 leagues.

* * In the preceding Journal, the Course and Distance, put down in the second and third columns, are those made good for the whole day; after variation of the compass; lee way, heave of the sea, currents, &c. are allowed for, in the judgment of the navigator. The fourth and sixth columns contain the Latitude and Longitude of the Ship deduced from that course and distance on the noon of the day mentioned in the first column; being the noon of the civil day, or that where the nautical day ends, and the astronomical one begins. The fourth column contains the Latitude observed at the same noon, and the seventh contains the Longitude of the Ship as carried on from the last lunar observation by means of the Log, or dead reckoning, as it is usually called. It would, perhaps, in general, have been better to have carried it on by the Watch (No. 1.;) but it may yet be done, by any person who wishes to have the Longitude of a particular place more correct, or corroborated by a greater number of observations, as the apparent times of most of the lunar observations were deduced from altitudes taken for the Watch. And it may here be observed, that the Longitude of any place, obtained by reducing a number of observations to that place by means of the Watch, will gene-

rally be had pretty true, notwithstanding that the rate which the Watch was then going at may differ something from that made use of; nay even if the rate of the Watch's going alter in that time, provided that all the observations made in an equal extent of time before and after making that land be used, and reduced separately thereto, and the mean of the two Longitudes thus obtained be made use of; as it may reasonably be presumed, that although the Watch's motion be not quite uniform, the acceleration or retardation of that motion will be nearly so, and of course cause no material error in a fortnight, during which interval several observations were generally got, at least when they were near any lands, or where the exact situation of the Ship was of any consequence. The two last columns contain the Longitude of the Ship as deduced from the two Watches, No. 1. and 2. so long as No. 2. went with any tolerable degree of regularity: afterwards, the last column is discontinued.

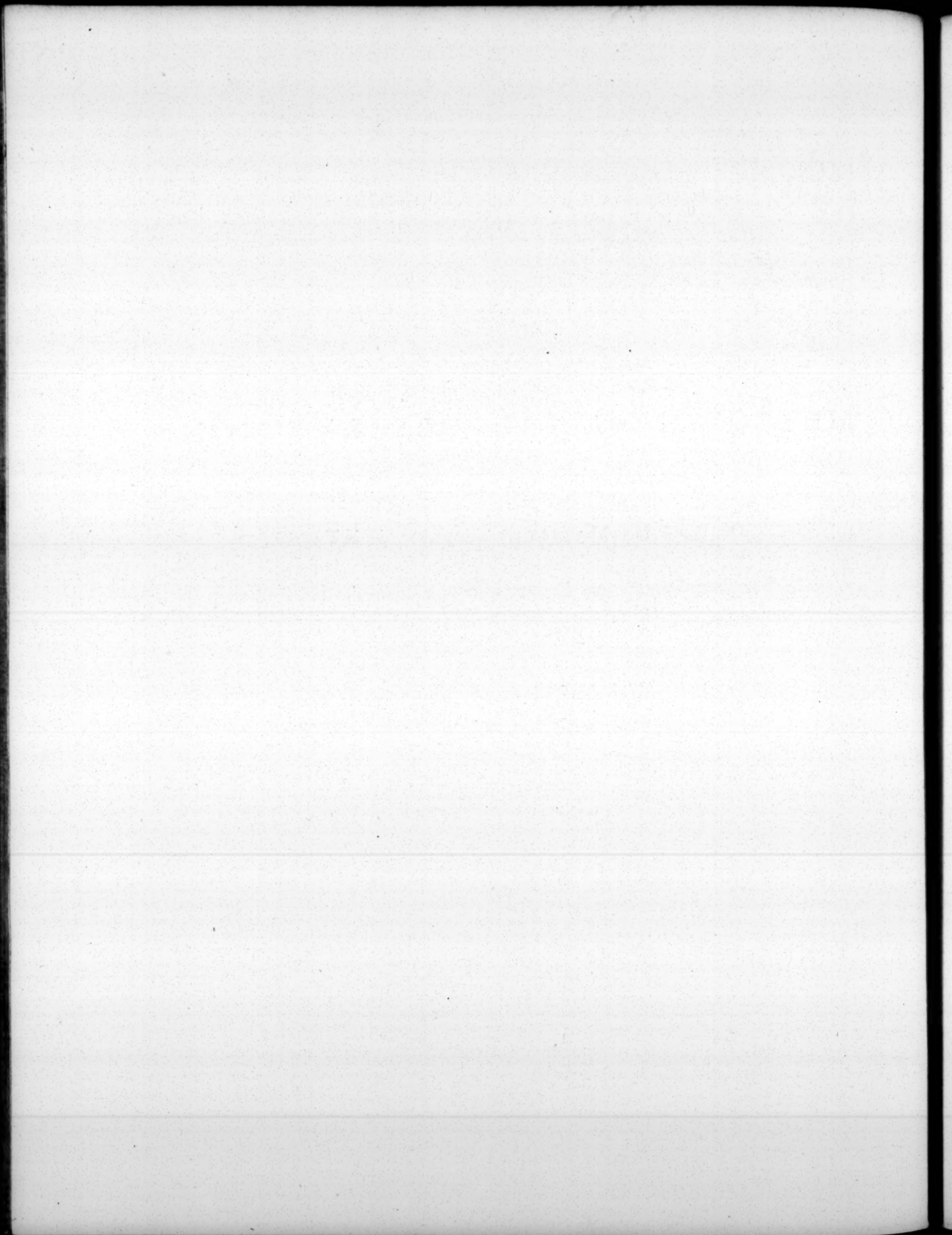
METEOROLOGICAL OBSERVATIONS,

M A D E

On Board His MAJESTY'S Sloop ADVENTURE,

In her late Voyage on DISCOVERIES towards the SOUTH.

By Mr. WILLIAM BAYLEY.



1772.	Morn.	Noon.				Even.	Winds.	Weather, &c.
		Ther- mo- meter.	Latitude North.	Longitude West of Greenwich.	Baro- meter.	Ther- mo- meter.		
♀ July 17.	67	46 26	7 41 $\frac{1}{2}$	29,9	68	66	N. W.	Brisk wind and clear weather.
h — 18.	68	46 46	8 2	29,87	69	65	S. W. by W.	Ditto, squally.
○ — 19.	65	45 20	8 46	29,9	64	65	N. W.	Moderate wind, and cloudy.
h — 20.	65 $\frac{1}{2}$	43 56	8 55	30,0	67	64 $\frac{1}{2}$	W. N. W.	Brisk wind, with rain.
♂ — 21.	63	43 29 $\frac{1}{2}$	9 10	29,9	67	65	{ West. E. S. E. }	Hazy weather.
♀ — 22.	65	43 37 $\frac{1}{2}$	9 32	30,0	66	65	N. W.	Moderate wind, and cloudy.
h — 23.	67	42 16	11 28	30,08	68	66	North.	Brisk wind, and fine weather.
♀ — 24.	66	40 3 $\frac{1}{2}$	11 55	30,03	67	67	N. E.	Ditto.
h — 25.	68	37 40 $\frac{1}{2}$	13 33	30,15	70	68	Ditto.	Ditto, cloudy.
○ — 26.	70	35 31 $\frac{1}{2}$	14 54	30,05	72	69	Ditto.	Moderate wind, ditto.
h — 27.	69 $\frac{1}{2}$	33 43	15 38	29,9	72 $\frac{1}{2}$	71	Ditto.	Ditto.
♂ — 28.	72	32 48	16 55	30,01	74 $\frac{1}{2}$	73	North.	Ditto, fine weather.
♀ — 29.	72	At Madeira.		29,88	75	73		Brisk wind, and squally.
h — 30.	73			30,1	76	74	Variable.	Gentle breezes, with rain.
♀ — 31.	74	32 33 $\frac{1}{2}$	17 5	30,26	75 $\frac{1}{2}$	74		Ditto.
h Aug. 1.	73			29,92	76	75		Ditto.
○ — 2.	71	32 0 $\frac{1}{2}$	16 29	29,69	73	72 $\frac{1}{2}$	East.	Brisk wind, and squally weather.
h — 3.	72	29 43 $\frac{1}{2}$	16 52	29,8	73	72 $\frac{1}{2}$	N. E.	Ditto, and fine weather.
♂ — 4.	74	28 40 $\frac{1}{2}$	18 3	29,77	73	73	N. E. by E.	Ditto, and cloudy.
♀ — 5.	73	27 53 $\frac{1}{2}$	18 26	29,87	73	72	{ N. E. S. W. }	Moderate wind, and ditto.
h — 6.	73	26 6 $\frac{1}{2}$	19 2	30,0	73	72	E. by N.	Ditto.
♀ — 7.	76	24 9	19 27	30,05	75	73	Ditto.	Ditto.
h — 8.	74	22 10 $\frac{1}{2}$	19 56	29,95	76	73	E. by S.	Brisk wind, ditto.
○ — 9.	74	20 8 $\frac{1}{2}$	20 50 $\frac{1}{2}$	29,6	75 $\frac{1}{2}$	74 $\frac{1}{2}$	N. N. E.	Moderate wind, and fine weath.
h — 10.	74	18 10	22 11 30	30,0	77	77	Ditto.	Brisk wind, and cloudy.
♂ — 11.	78 $\frac{1}{2}$	16 12	22 50 30	29,9	83	78	Ditto.	Ditto.
♀ — 12.	77	15 07	23 25	29,85	79	78	Ditto.	Moderate wind, ditto.
h — 13.	78	14 54	23 29	29,9	78 $\frac{1}{2}$	79	Ditto.	Brisk wind, with rain.
♀ — 14.	79	14 54	23 29	30,0	81 $\frac{1}{2}$	78 $\frac{1}{2}$	Ditto.	Cloudy, with drizzling rain.
h — 15.	79 $\frac{1}{2}$	13 48	22 48	30,0	81	79	Ditto.	Ditto.
○ — 16.	78 $\frac{1}{2}$	12 22	22 30	29,9	80	78	East.	Little wind, and cloudy.
h — 17.	78 $\frac{1}{2}$	11 50	21 57	29,95	81	80		Ditto, and drizzling rain.
♂ — 18.	77	11 25 $\frac{1}{2}$	21 21 $\frac{1}{2}$	29,95	81	77	S. W.	Ditto, cloudy.
♀ — 19.	79	10 47	20 52	30,0	77	77 $\frac{1}{2}$	S. W. by W.	Ditto, heavy rain.
h — 20.	76	9 34	20 41	29,95	78 $\frac{1}{2}$	77 $\frac{1}{2}$	N. W. by N.	Ditto.
♀ — 21.	79	8 41 $\frac{1}{2}$	20 6	29,9	78 $\frac{1}{2}$	77 $\frac{1}{2}$	{ East. S. W. }	Squally, with rain.
h — 22.	79	7 55	19 16	29,9	79	79	Ditto.	Brisk wind, and cloudy.
○ — 23.	80 $\frac{1}{2}$	6 53 $\frac{1}{2}$	18 24	30,05	80	78	Ditto.	Ditto.
h — 24.	79	6 24 $\frac{1}{2}$	17 18	29,9	79	78	S. by W.	Moderate wind, and cloudy.
♂ — 25.	78 $\frac{1}{2}$	5 53 $\frac{3}{4}$	16 32	29,95	79 $\frac{1}{2}$	79	S. W. by S.	Ditto, and fine weather.
♀ — 26.	78 $\frac{1}{2}$	5 10	15 37	29,95	78 $\frac{1}{2}$	78	S. W.	Ditto, with rain.
h — 27.	78	4 13 $\frac{1}{2}$	14 48	29,9	78 $\frac{1}{2}$	78	S. W. by S.	Brisk wind, and cloudy.

1772.		Morn.		Noon.			Even.		Winds.	Weather.
		Thermometer.	Latitude North.	Longitude West of Greenwich.	Barometer.	Thermom.	Thermometer.			
♀	Aug. 28.	78	3 40 $\frac{3}{4}$	13 41	29,85	77	78	S. S. W.	Brisk wind, and cloudy.	
♂	— 29.	77	3 15 $\frac{3}{4}$	12 44 $\frac{1}{2}$	29,8	78	76	Ditto.	Moderate, and fair weather.	
☉	— 30.	78 $\frac{1}{2}$	2 40 $\frac{3}{4}$	11 38	29,75	78	77	Ditto.	Ditto.	
♂	— 31.	78	2 40	10 36 $\frac{1}{2}$	29,95	79	77	S. by W.	Ditto, and cloudy.	
♂	Sept. 1.	78 $\frac{1}{2}$	1 59	5 46 $\frac{1}{2}$	29,95	78 $\frac{1}{2}$	78	South.	Little wind, and fine weather.	
♀	— 2.	77	1 24	6 34 $\frac{1}{2}$	29,95	78	78	Ditto.	Ditto.	
♂	— 3.	77	1 01	8 32	29,8	77 $\frac{1}{2}$	77 $\frac{1}{2}$	S. by W.	Ditto, and cloudy.	
♀	— 4.	74	0 51	9 31	29,95	77	76	South.	Brisk wind, and fine weather.	
♂	— 5.	76	0 56	9 42	29,95	77 $\frac{1}{2}$	76 $\frac{1}{2}$	S. W.	Little wind, ditto.	
☉	— 6.	77	0 36	9 21	29,8	77 $\frac{1}{2}$	76	Ditto.	Moderate wind, and cloudy.	
♂	— 7.	76	0 23 South.	8 44	29,9	76	75	S. by W.	Ditto.	
♂	— 8.	76	0 18	9 46	30,0	76 $\frac{1}{2}$	74 $\frac{1}{2}$	S. by E.	Ditto.	
♀	— 9.	75	0 55	10 39	29,8	76 $\frac{1}{2}$	75	Ditto.	Ditto, and fine weather.	
♂	— 10.	74	1 57 $\frac{1}{2}$	11 16	30,0	77	73	S. S. E.	Ditto, and cloudy.	
♀	— 11.	74	2 59 $\frac{1}{2}$	11 54	30,0	76	73	Ditto.	Ditto.	
♂	— 12.	73	4 10 $\frac{1}{2}$	12 46	30,0	75	72 $\frac{1}{2}$	S. E.	Ditto.	
☉	— 13.	73	5 5	13 34	30,05	75	73	S. by E.	Ditto.	
♂	— 14.	73	6 29	14 27	29,9	75	73	S. S. E.	Ditto, and fine weather.	
♂	— 15.	72	8 10	15 06	29,8	75	72 $\frac{1}{2}$	S. E.	Ditto.	
♀	— 16.	73	9 36	15 41 $\frac{1}{2}$	29,75	74 $\frac{1}{2}$	73	Ditto.	Squally weather.	
♂	— 17.	73	11 0	16 28	30,05	73 $\frac{1}{2}$	73	Ditto.		
♀	— 18.	72 $\frac{1}{2}$	12 26	17 38 $\frac{1}{2}$	30,1	74	73	S. E. by E.		
♂	— 19.	72	14 05	18 36	30,0	73	72	S. E.	Brisk wind, and squally.	
☉	— 20.	73	15 36	19 14	29,95	73	72	S. E. by E.		
♂	— 21.	73	17 09 $\frac{1}{2}$	19 56	30,05	73	72	Ditto.		
♂	— 22.	73	18 39 $\frac{1}{2}$	20 36	30,1	73 $\frac{1}{2}$	72	Ditto.	Brisk wind, and fine weather.	
♀	— 23.	72	20 6 $\frac{3}{4}$	21 32	30,1	72	72	E. S. E.		
♂	— 24.	72	21 30	22 01	30,0	72 $\frac{1}{2}$	71 $\frac{1}{2}$	S. E. by E.		
♀	— 25.	71	22 50	22 55	29,9	72	70 $\frac{1}{2}$	S. E.	Brisk wind, and fine weather.	
♂	— 26.	71	24 13	22 46	30,0	72	71	East.		
☉	— 27.	70 $\frac{1}{2}$	24 40	22 45	29,9	72 $\frac{1}{2}$	70 $\frac{1}{2}$	E. S. E.		
A little after noon Mr. Bayley let down a Thermometer to the depth of 80 fathoms below the surface of the sea, where it remained 16 $\frac{1}{2}$, and he was 6' drawing it up: On examination, he found it stand at 68°. The same Thermometer stood at 70° in the water at the surface, and at 72° $\frac{1}{2}$ in the open air.										
♂	— 28.	71	25 29	22 23	30,2	72	71	E. N. E.	Brisk wind, and cloudy.	
♂	— 29.	71	26 13	21 50	29,95	71	67	N. E.	Squally, with rain.	
♀	— 30.	69	26 58	19 48	29,85	70 $\frac{1}{2}$	71	North.	Moderate wind, and fine weath.	
♂	Oct. 1.	67	27 25	18 13	29,95	69 $\frac{1}{2}$	69 $\frac{1}{2}$	{ N. E. W. S. W. }	Squally, with rain.	
♀	— 2.	67	27 33	17 22	30,0	68 $\frac{1}{2}$	65	{ S. W. S. S. E. }	Little wind, and fine weather.	
♂	— 3.	66	28 04	16 02	30,15	66	64	S. W. by S.		
The water in Dr. Lind's Wind-gage, (see Phil. Transactions, vol. lxxv. p. 343.) sunk $\frac{1}{4}$ th of an inch in the squalls.										

1772.	Morn.		Noon.				Even.		Winds.	Weather, &c.
	Ther- mo- meter.	Latitude	Longitude	Barometer.	Thermom.	Ther- mo- meter.				
		South.	West of Green- wich.							
		o		o						
○ Oct.	4.	64	28 59	13 46	30,1	64	57	S. W.	Squally, with drizzling rain.	
▷ —	5.	56	29 0	12 21	30,05	60½	56	South.	Brisk wind and cloudy.	
♂ —	6.	59	29 42½	12 28	29,95	61	58	S. E.	Ditto, and fine weather.	
♀ —	7.	59	31 18	12 28	30,1	59	57	E. S. E.	Squally weather.	
⌞ —	8.	58	32 42½	12 11	30,0	59	58½	East.		
♀ —	9.	59	33 52½	10 56	30,15	59½	57	E. N. E.	Moderate wind, and cloudy.	
⌞ —	10.	59	34 28	9 13	30,35	65	58	N. E.	Squally weather.	
○ —	11.	57	34 41	6 50	30,3	59	59	N. N. E.	Little wind, and fine weather.	
▷ —	12.	57	34 49	6 04	30,1	65	58	North.		
♂ —	13.	58	35 09	6 0	30,15	65	56	N. E.	Squally, with rain.	
♀ —	14.	57	35 29	4 04	30,25	60	58	N. E.		
⌞ —	15.	58	35 33	1 51	30,0	63½	57	N. E. by N.	Brisk wind, and cloudy.	
				East.						
♀ —	16.	59	35 14	1 07	29,95	62½	57	North.	Brisk wind, and cloudy.	
⌞ —	17.	56	34 57	4 49	30,05	58	54	West.		
○ —	18.	53	34 33	7 35	30,1	57	53½	S. W.	Brisk wind, and drizzling rain.	
▷ —	19.	54	34 21	8 35	30,0	56	53	S. S. E.		
♂ —	20.	56	34 45	8 07½	30,2	60	54	East.	Little wind, and fine weather.	
♀ —	21.	57	35 31½	8 37	30,2	59	55	East.		
⌞ —	22.	56	36 48	9 06	29,85	59	57½	East.	Brisk wind, and cloudy.	
♀ —	23.	57	37 09.	9 45	29,95	59	57	N. E. by E.		
⌞ —	24.	54	36 39.	11 43½	30,1	57	57½	West.	Brisk wind, and cloudy.	
○ —	25.	54½	35 26	14 08	30,25	56½	57	S. S. E.		
▷ —	26.	57	34 43	15 37	30,05	58½	56½	S. S. E.	Moderate wind, and cloudy.	
♂ —	27.	57	33 47	16 50	30,0	61	60	S. S. E.	Ditto, fair weather.	
♀ —	28.	60	33 38	17 49	30,0	62½	59½	S. W.	Ditto.	
⌞ —	29.	60	33 51	19 9	29,85	60½	58	N. W.	Ditto.	
♀ —	30.	56	In Table Bay, at the Cape of Good Hope, Lat. 33° 55½ S. Long. 18° 23¼ E.							
○ Nov.	22.		33 55	18 23		60		N. by W.	Brisk wind, and fine weather.	
▷ —	23.		34 34	17 42		65		N. W.	Strong gales, and flying clouds.	
♂ —	24.		35 20	17 51		63½		S. E.	Ditto.	
♀ —	25.		37 14	16 53	30,0	63	62½	S. E. ½ E.	Ditto.	
⌞ —	26.	62	39 0	15 48	29,9	69	60	N. E.	Brisk wind, ditto.	
♀ —	27.	51	40 01	16 40	29,95	52	53	W. by S.	Strong wind, ditto.	
⌞ —	28.	53	40 55	16 36	29,8	59	52	N. N. W.	More moderate, and cloudy.	
○ —	29.	52	42 08	16 35	30,0	52½	53	N. W.	Strong wind, with rain.	
▷ —	30.	52	42 26	17 43	29,8	55	52	Ditto.		
The water in Dr. Lind's wind-gage sunk 6-10ths of an inch in the squalls, and 0,35 in the intervals between them.										
♂ Dec.	1.	51½	43 14	17 53	29,9	51	46	W. N. W.	Strong wind, with rain.	
♀ —	2.	47		18 36	29,5	49	47	Ditto.		
⌞ —	3.	47	44 27	18 32	29,4	48	46	N. W.	Strong wind, and fine weather.	
♀ —	4.	44	45 23½	18 02	29,5	45	42	W. N. W.	Gentle gales, and fine weather.	
⌞ —	5.	44	47 09	17 31	29,75	46	40	N. by W.	Ditto, and cloudy.	

1772.		Morn.		Noon.			Even.		Wind.	Weather, &c.
		Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.	Baro- meter.	Thermom- eter.	Ther- mo- meter.	Ther- mo- meter.		
○	Dec 6.	36	48 23	17 34 $\frac{1}{2}$	29,95	36	35		W. S. W.	Gentle gales, and fine weather.
▷	— 7.	38	49 49	17 04	29,7	42	38		North.	Strong gales, with rain.
♂	— 8.	38		17 54	29,8	39 $\frac{1}{2}$	36		N. W. by N.	Ditto, cloudy.
♀	— 9.	33 $\frac{1}{2}$	49 46	18 12	29,35	34	35		N. W. by W.	Brisk wind, with snow.
⌘	— 10.	31 $\frac{1}{2}$	51 04	18 40	29,55	35	34 $\frac{1}{2}$		N. by W.	Little wind, with snow.
♀	— 11.	31 $\frac{1}{2}$	51 50	18 40	29,35	32 $\frac{1}{2}$	33		N. N. W.	Ditto, cloudy.
h	— 12.	32 $\frac{1}{2}$	Cloudy.	19 0	29,3	34	32		W. by N.	Ditto, and much snow.
○	— 13.	30 $\frac{1}{2}$	Cloudy.	20 12	28,85	31	30		W. N. W.	
▷	— 14.	30 $\frac{1}{2}$	54 53	22 04	28,55	32	30		N. by E.	Light airs, and fair weather.
♂	— 15.	28	55 02	22 30	28,55	31 $\frac{1}{2}$	30 $\frac{1}{2}$		Ditto.	Light airs, and foggy, with snow.
♀	— 16.	31	55 0	22 22	28,55	31 $\frac{1}{2}$	31 $\frac{1}{2}$		W. N. W.	
⌘	— 17.	31	55 21	23 30	28,65	31 $\frac{1}{2}$	30 $\frac{1}{2}$		N. W.	Light wind, with snow.
♀	— 18.	31	54 59	24 40	28,7	31 $\frac{1}{2}$	30 $\frac{1}{2}$		N. N. W.	
h	— 19.	30	54 34	25 10	28,55	31 $\frac{1}{2}$	31 $\frac{1}{2}$		{ N. W. and N. N. E.	Strong wind, with snow.
○	— 20.	32	54 11	27 27	28,55	34	31 $\frac{1}{2}$		N. N. W.	
▷	— 21.	32	54 07	28 27	28,6	34	31 $\frac{1}{2}$		W. N. W.	Little wind, and flying clouds.
♂	— 22.	32	54 52	29 01	28,6	31 $\frac{1}{2}$	32		Ditto.	
♀	— 23.	32	55 24	30 12	29,15	31 $\frac{1}{2}$	33		N. W. by W.	
⌘	— 24.	32	56 29	30 02	29,35	34	32		E. N. E.	
♀	— 25.	31 $\frac{1}{2}$	57 54	29 06	29,1	31 $\frac{1}{2}$	31		South.	Brisk wind and cloudy.
h	— 26.	31	58 30	26 22	29,35	32	31		Ditto.	Little wind, and cloudy.
○	— 27.	32	58 21	24 06	29,5	35	32		N. W. by W.	Little wind, and fair weather.
Let down a Thermometer 160 fathoms below the surface of the sea; it lay at that depth 25 minutes, and was seven minutes drawing up, when it was found to stand at 33 $\frac{1}{2}$: the same thermometer stood at 32 in the water at the surface, and at 31 $\frac{1}{2}$ in the open air.										
▷	— 28.	30 $\frac{1}{2}$	58 33	22 11	29,55	31 $\frac{1}{2}$	31 $\frac{1}{2}$		E. by N.	Brisk wind, with snow.
♂	— 29.	31 $\frac{1}{2}$	59 11	19 57	29,1	33	31		East.	Little wind, with snow.
♀	— 30.	32	59 22	18 25	28,9	34	32		E. S. E.	Ditto, with rain.
⌘	— 31.	30 $\frac{1}{2}$	59 55	15 45	28,95	33	32		S. E.	Strong wind, and cloudy.
1773.										
♀	Jan. 1.	32	60 0	13 0	28,8	31	32		S. S. W.	Brisk wind, with snow.
h	— 2.	31	59 21	10 06	29,45	32	31 $\frac{1}{2}$		W. by N.	Ditto, and fair weather.
○	— 3.	31	59 23	11 24	29,3	32	31		E. N. E.	Strong wind, with snow.
▷	— 4.	32	59 01	14 14	29,4	33	33		N. N. W.	
♂	— 5.	33	59 37	19 04	29,35	33	33		Ditto.	Moderate wind, and cloudy. Ditto, and thick snow. Ditto, and rain.
♀	— 6.	33	59 59	23 08	29,15	33	33 $\frac{1}{2}$		N. W. by W.	
⌘	— 7.	32 $\frac{1}{2}$	60 36	27 1	29,05	34	32		W. N. W.	
♀	— 8.	32 $\frac{1}{2}$	61 20	31 20	28,95	34	33		Ditto.	Moderate wind, and fair weather.
h	— 9.	32 $\frac{1}{2}$	61 36	33 26	28,95	35	33		Ditto.	
○	— 10.	32 $\frac{1}{2}$	61 57	34 30	29,2	34	33		N. by W.	
▷	— 11.	32 $\frac{1}{2}$	63 19	35 46	29,2	34 $\frac{1}{2}$	32 $\frac{1}{2}$		North.	
♂	— 12.	33	64 14	37 0	29,35	35	32		S. S. E.	Moderate wind, and fair weather.
♀	— 13.	34	64 14	39 43	29,4	40	33		S. S. W.	
⌘	— 14.	32	63 57	40 03	29,25	35 $\frac{1}{2}$	33		S. S. E.	

1773.		Morn.		Noon.			Even.		Winds.	Weather, &c.
		Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.	Barom- eter.	Ther- m- om.	Ther- mo- meter.			
♀	Jan. 15.	34	63 35	40 03	29,05	37	33		S. E.	
h	16.	34	64 32	39 53	28,9	35	34		Ditto.	
○	17.	32	66 34	40 02	28,95	32½	33		S. E. by E.	Brisk wind, with snow and fleet.
h	18.	33	65 58	40 02	28,9	34	33		S. W. by S.	
♂	19.	33	64 29½	40 58½	29,1	35	33		S. E. by E.	Moderate wind, and cloudy.
♀	20.	34	63 59	40 41	28,8	33	32½		Ditto.	Strong wind, with snow.
h	21.	33½	62 45	43 14	28,7	33½	34½		S. S. E.	Little wind, ditto.
♀	22.	34	61 33	45 29	29,3	4½	35		South	Ditto, and cloudy.
h	23.	34	60 02	48 36	29,15	35	34½		S. by E.	
○	24.	34	58 24	51 47	29,3	35	33		N. W.	Strong wind, with snow and fleet.
h	25.	34	58 08	52 0	29,15	35	34		E. N. E.	Strong wind, and foggy.
♂	26.	34	57 22	53 57	29,3	34½	34½			Calm, with thick snow.
♀	27.	33½	56 30	52 03	29,1	35	33		S. W. by W.	Gentle gales, and fair weather.
h	28.	33	54 32	53 09	28,1	36	33½		N. N. W.	Brisk wind, and flying clouds.
♀	29.	34	52 28	54 12	29,0	37	34		N. by W.	Ditto, and cloudy.
h	30.	39	51 31	55 22	29,5	40	39		N. N. W.	Strong wind, with much rain.
○	31.	38	50 48	56 11	29,55	39	38		Ditto.	
h	Feb. 1.	41	48 32	59 03	30,05	42½	47		N. by W.	Brisk wind, with flying clouds.
♂	2.	44	48 45	59 19	30,15	44	44		N. W.	Little wind, with drizzling rain.
♀	3.	44	49 15	59 19	30,15	44	43		N. N. W.	Strong wind, with heavy rain.
h	4.	43	49 04	57 39	29,5	43½	43½		N. W.	Light winds, with cloudy weather.
♀	5.	40	48 0	60 14	29,5	41½	40½		N. N. E.	Brisk wind, and fair weather.
h	6.	42	48 53	60 22	29,6	45	43		N. N. W.	Ditto, with flight showers.
○	7.	43	50 14	63 06	29,8	44	42½		N. W.	Light winds, and fair weather.
h	8.	44	50 14	65 11	29,5	43	43		N. E.	Ditto, thick fog and rain.
♂	9.	43	50 17	65 27	28,7	43	41		N. N. E.	Strong winds, and much rain.
♀	10.	39	49 54	66 0	29,4	40	40		N. W. by W.	Ditto, and fair weather.
h	11.	40	50 18	66 11	29,9	42	40		N. N. W.	Ditto, and foggy.
♀	12.	38	50 41	69 06	29,5	40	37		Ditto.	
h	13.	37	51 05	72 11	29,6	39	39		N. W.	
○	14.	38	51 39½	75 30	29,5	39½	38		Ditto.	Moderate, and cloudy.
h	15.	37	52 13	79 18	29,6	38	39		S. W. by W.	
♂	16.	36	52 32	81 22	29,6	37½	37		W. N. W.	
♀	17.	36	52 54	85 10	29,5	37	37		Ditto.	
h	18.	37	52 52	88 52	29,55	40	37		W. by N.	Strong wind, with rain.
♀	19.	36	52 38	92 0	28,85	38	38		S. W.	
h	20.	36	52 16	96 56	29,05	36	37		W. N. W.	Brisk wind, with snow.
○	21.	40	52 15	99 54	29,6	41	38		S. W.	Little wind, and fair weather.
h	22.	39	52 29	102 49	29,0	38	40		E. N. E.	Brisk wind, and rainy weather.
♂	23.	39	52 17	104 16	28,5	41½	39		N. W. by N.	Ditto, and squally.
♀	24.	40	52 07	106 49	28,5	43	41		N. W.	Gentle breezes, and fair weather.
h	25.	41	51 41	110 30	29,45	45	40		W. N. W.	Brisk wind, and flying clouds.

This evening we saw the Southern lights for the first time: they were so bright that large print might have been read by their light.

1773.	Morn.		Noon.				Even.		Winds.	Weather, &c.
	Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.	Baro- meter.	Thermom. meter.	Ther- mo- meter.				
							°	'		
♀ Feb. 26.	43	51 18	114 02	29,95	44	44	North.	Brisk wind, and hazy.		
h — 27.	45	50 47	117 59	29,45	43	45	N. N. W.	Ditto, and drizzling rain.		
○ — 28.	43	50 24	122 30	29,45	43½	44	W. N. W.	Ditto, and flying clouds.		
▷ March 1.	47	49 02	126 0	29,65	49½	46	N. N. W.	Ditto, in squalls.		
♂ — 2.	52	47 29	129 0	29,75	52	52	N. W.	Ditto, with thick drizzling weather.		
♀ — 3.	53	46 18	130 15	29,65	53	52	N. N. W.			
h — 4.	49	44 48	132 15	29,6	51	51	S. W.	Brisk wind, and flying clouds.		
♀ — 5.	52	44 3	134 40	29,75	56	52	West.	Ditto, and fair weather.		
h — 6.	53	43 57	138 0	29,6	52	51	W. S. W.	Brisk wind, and squally weather.		
○ — 7.	51½	43 46	141 40	29,75	52½	55	W. by N.	Moderate wind, and fine weather.		
▷ — 8.	54½	43 41	144 06	29,9	55	52	West.			
♂ — 9.	55	43 46	145 37	30,0	57	54	N. N. W.	Strong wind, and drizzling rain.		
♀ — 10.	57	43 40	147 20	29,55	54	53	W. S. W.			
h — 11.	56	43 23	147 30	29,95	57	52	W. N. W.	Little wind, and fine weather.		
♀ — 12.	57	In Adventure's Bay, at Van			30,0	58	N. by W.			
h — 13.	55½	Dieman's Land.			30,0	57	W. by S.			
○ — 14.	57				29,72	57	S. S. E.			
▷ — 15.	56	43 23	147 30					Brisk wind, with rain.		
♂ — 16.	52	43 20	147 40	29,5	56	51	Ditto.	Brisk wind, and cloudy.		
♀ — 17.	53	43 08	148 26	29,65	55	53	W. by S.	Brisk wind, and drizzling rain.		
h — 18.	53	41 44	148 11½	29,8	54½	52	W. by N.			
▷ — 19.	57	40 22	148 08	29,95	54½	52	S. S. W.	Moderate wind, and fine weather.		
♀ — 20.	60	39 21	148 33	30,05	59	54	S. S. E.	Moderate wind, and cloudy.		
h — 21.	58	39 22	150 13	30,01	61	56	South.			
○ — 22.	57	39 16⅔	151 43	30,15	59½	57	S. by E.	Strong wind, with rain.		
▷ — 23.	55	39 28	152 58	30,05	53	57	South.			
♂ — 24.	57	39 08	154 25	30,05	54	54	Ditto.	Brisk wind, and cloudy.		
♀ — 25.	57	38 58	155 27	30,05	58	53	Ditto.	Brisk wind, and squally.		
h — 26.	61	39 21	157 37	30,2	60	60	Ditto.			
♀ — 27.	61½	40 06	159 44	30,25	61½	59	Ditto.	Brisk wind, and fine weather.		
h — 28.	62	40 14½	161 06	30,5	61	60	S. ½ W.			
○ — 29.	62	40 16	161 36	30,4	64	61	S. W.			
Let down a thermometer to the depth of 140 fathoms, and on drawing it up found it stand at 56°½; it stood at 64° in the open air, and at 59°½ in the water at the surface.										
▷ — 30.	61	40 42	163 07	30,5	64	62	North.	Brisk wind, and fine weather.		
♂ — 31.	62	41 14	164 49	30,45	64	64	N. by E.			
♀ — April 1.	64	41 33	166 47	30,35	64½	62	North.	Ditto.		
h — 2.	63	41 31	168 35	30,05	63½	62	N. N. W.	Brisk wind, and much rain.		
♀ — 3.	62	41 17	170 45	29,7	62	61	N. by W.			
h — 4.	62	40 40	171 45	29,6	63	60	N. N. W.	Moderate wind, and fine weather.		
○ — 5.	63	40 16		29,65	66	62	East.			
▷ — 6.	63	40 53		29,8	61½	61	S. W. by S.			
♂ — 7.	63	41 04½	173 56	30,15	61½	57	N. W.			

1773.		Morn.	Noon.		Baro- meter.	Thermom. meter.	Even.	Ther- mo- meter.	Winds.	Weather, &c.
		Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.						
April	7.	54	41 05 47	173 56	30,4	58	56		South.	Moderate wind, and fair weather.
"	8.	52	In Q. Charlotte's Sound.		30,1	58	53			
"	9.	54			29,8	61	55			
"	10.	54			29,85	56	66			
"	11.	52½			30,1	56½	63		South.	Brisk wind, and flying clouds.
"	12.	54			30,1	62	56		N. N. W.	Ditto, and fair weather.
"	13.	57			30,14	58½	54		N. by W.	Moderate wind, and fair weather.
"	14.	53			30,0	59	56		Ditto.	
"	15.	52			29,92	57	54		S. by W.	Strong wind, and cloudy.
"	16.	56			30,03	53	54		S. S. W.	Little wind, and fair weather.
"	17.								Ditto.	Strong wind, and ditto.
"	18.								Ditto.	Ditto, and rain.
"	19.								Ditto.	Ditto, and cloudy.
"	20.								Ditto.	Ditto, and fair weather.
"	21.	53			29,77	59	59		S. W. by S.	Moderate wind, and ditto.
"	22.	53			29,55	53½	52½		W. S. W.	Brisk wind, with rain.
"	23.	51			29,64	51	51		Ditto.	
"	24.	49½			29,82	54	50		Ditto.	Moderate wind, and fine weather.
"	25.	57½			29,9	58	57		West.	
"	26.	58			29,92	58½	56		N. E.	
"	27.	44			30,04	57½	54		S. S. W.	
"	28.	51			30,0	56	54½		Ditto.	Moderate wind, and fair weather.
"	29.	49½			30,14	54	50		Ditto.	
"	30.	50½			30,24	54	51½		Ditto.	
May	1.	56			30,36	59	54½		N. by E.	
"	2.	49			30,33	54½	55		S. S. W.	Moderate wind, with rain at times.
"	3.	47			30,27	57	45½		N. N. E.	
"	4.	53½			29,96	59	49		W. by N.	
"	5.	57			29,7	57	53		Ditto.	
"	6.	48			30,27	54	55		S. W. by S.	Scarce any wind, and very fine.
"	7.	51½			30,31	59	56		N. W.	Brisk wind, and fine weather.
"	8.	52½			30,06	57½	56½		W. by N.	
"	9.	57½			30,03	58½	54		S. S. W.	
"	10.	56			29,81	58½	56½		S. W. by W.	
"	11.	47			30,01	48	47		S. S. W.	Gentle breezes, and very fine weather.
"	12.	54½			30,28	52½	49		W. N. W.	
"	13.	45			30,15	52	49		S. S. W.	
"	14.	48			30,32	51½	52		N. E.	
"	15.	47			30,24	58	57		N. by W.	Strong wind, and flying clouds.
"	16.	57			29,75	58½	48		Ditto.	Ditto, with rain.
"	17.	51			29,63	46½	43		W. S. W.	Ditto, with heavy showers.
"	18.	52			29,5	58	47½		S. S. W.	Gentle breezes, and fine weather.
"	19.	40			29,7	51½	48		Ditto.	
"	20.	50			30,02	56	45		East.	

1773.		Morn.		Noon.			Even.		Wind.	Weather, &c.
		Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.	Baro- meter.	Ther- mom.	Ther- mo- meter.			
♀	May 21.	54			30,02	57	44	East.	Gentle breezes, and fine weather.	
♂	— 22.	49			29,86	49	47	N. N. E.		
○	— 23.	48			30,25	49	50	S. W. by W.		
⊙	— 24.	49			30,2	54	49	S. S. W.	Brisk wind, and thick, with rain. Strong wind, and ditto.	
♂	— 25.	49			30,1	57½	48	N. by E.		
♀	— 26.	49½			29,6	57½	47	E. by N.		
⊙	— 27.	47			29,65	57	49	N. W.	Brisk wind, with rain.	
♀	— 28.	49			29,66	58	48½	N. E.		
♂	— 29.	48			29,75	58	49	Ditto.		
○	— 30.	59½			29,81	59½	52	West.	Moderate wind, with flying clouds.	
⊙	— 31.	57			30,1	49½	51	S. S. W.		
♂	June 1.	56			30,3	56	50	Ditto.		Ditto, with drizzling rain.
♀	— 2.	52			30,19	58	56	Ditto.		
⊙	— 3.	53			30,3	58	51	S. W.	Ditto, and fair weather.	
♀	— 4.	54			30,41	59½	49	S. S. W.		
♂	— 5.	57			30,41	49½	47	Ditto.		Brisk wind, and cloudy. Strong wind, with rain.
○	— 6.	52			30,3	56	47	Ditto.		
⊙	— 7.	49½	41 3½	174 04	30,05	56	48	Ditto.	Brisk wind, and fair weather. Gentle gales, and ditto.	
♂	— 8.	49½	41 53½	174 48	29,7	51½	47½	N. W.		
♀	— 9.	55	42 50	176 48	29,55	52½	48	Ditto.		Gentle gales, and flying clouds.
⊙	— 10.	53	43 57	179 26	29,5	57	47	N. N. W.		
♀	— 11.	52	44 45	181 06	29,7	57	48	N. by W.	Brisk wind, with thick weather. Little wind, and hazy.	
♂	— 12.	51½	45 45	183 49	29,6	54	47	N. N. W.		
○	— 13.	50	46 29	184 0	29,85	52	49	E. S. E.		Brisk wind, and cloudy. Little wind, and hazy.
⊙	— 14.	49	46 43½	185 14	29,6	48½	48	W. S. W.		
♂	— 15.	54	46 45½	186 07	29,75	49	47	N. E. by E.	Brisk wind, with rain. Brisk wind, and hazy.	
♀	— 16.	48	47 23	186 32	30,0	50	49	E. by S.		
⊙	— 17.	48	46 21	186 32	29,8	49	47½	E. S. E.		Brisk wind, and flying clouds. Little wind, and cloudy.
♀	— 18.	49	45 50	188 44	29,95	49	47	S. S. E.		
♂	— 19.	47½	45 12	190 46	30,1	50	47½	W. S. W.	Strong wind, with rain. Brisk wind, and cloudy. Ditto, with drizzling rain. Light airs, and foggy at times.	
○	— 20.	48	44 30	193 27	30,2	49	49	S. E.		
⊙	— 21.	50	44 17	194 52	30,15	51½	50	W. S. W.		Ditto, and fair weather. Brisk wind, and squally. Gentle breezes, and hazy.
♂	— 22.	51	44 32	190 32	30,15	52	49	W. by S.		
♀	— 23.	49	44 37	197 32	30,0	50	48½	N. W. by N.	Brisk wind, and flying clouds.	
⊙	— 24.	47	43 42	197 37	29,7	52½	49	East.		
♀	— 25.	54	43 13	197 12	29,5	54	49	E. by N.		Brisk wind, and cloudy. Ditto, with drizzling rain. Light airs, and foggy at times.
♂	— 26.	52	43 5	196 37	29,3	55	48	N. E. by N.		
○	— 27.	52	42 23	196 37	29,35	53	51	S. E. by E.	Ditto, and fair weather. Brisk wind, and squally. Gentle breezes, and hazy.	
⊙	— 28.	52	42 24	197 44	29,35	53	50	West.		
♂	— 29.	53	42 46	199 0	29,35	53	52	N. E.		Ditto, and fair weather. Brisk wind, and squally. Gentle breezes, and hazy.
♀	— 30.	51	42 0	200 25	29,45	52	50	South.		
⊙	July 1.	49	43 06	202 19	29,65	50	50	S. by E.	Ditto, and fair weather. Brisk wind, and flying clouds.	
♀	— 2.	49	42 59	203 40	29,75	51	50	S. S. E.		
♂	— 3.	48	43 13	205 03	29,8	53½	41	N. N. W.		

1773.		Morn.		Noon.			Even.		Wind.	Weather, &c.
		Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.	Baro- meter.	Ther- mo- meter.	Ther- mo- meter.	Ther- mo- meter.		
○	July 4.	49	43 57	205 52	29,9	50 1/2	48 1/2		E by S.	Brisk wind, and flying clouds.
○	5.	49	43 24	208 09	29,95	47 1/2	47			Strong wind, and squally, with rain.
δ	6.	52	42 05	208 43	29,75	52 1/2	49			Brisk wind, and flying clouds.
δ	7.	52	41 18 1/2	209 05	29,5	53 1/2	49 1/2			Little wind, and fair weather.
u	8.	52	41 59	210 49	29,5	51 1/2	48 1/2		West.	Fresh gales, and squally.
♀	9.	52 1/2	42 38	212 33	29,9	51 1/2	52 1/2		W. S. W.	Gentle gales, and flying clouds.
h	10.	53 1/2	43 38	215 43	30,0	51 1/2	51 1/2			Brisk wind, and squally.
○	11.	46	43 30	217 33	30,15	47	46		S. by W.	Gentle gales, and flying clouds.
○	12.	47	43 13 1/2	219 19	30,3	51 1/2	49		S. S. W.	
δ	13.	55	42 57 1/2	220 20	30,35	52	48 1/2		West.	Little wind, and fair weather.
δ	14.	49	42 50	221 32	30,05	50 1/2	47 1/2		N. E.	Brisk wind, and cloudy.
u	15.	50	42 30	221 23	29,1	52	47 1/2		E. N. E.	Strong wind, with drizzling rain.
♀	16.	48	41 23	223 0 1/2	29,4	50 1/2	47 1/2		S. S. W.	Brisk wind, with hail and rain.
h	17.	45	39 42 1/2	225 04	29,8	44	46		S. W. by S.	
○	18.	46	37 51 1/2	225 29	30,25	50 1/2	47		S. W.	Gentle gales, and fair weather.
○	19.	53	36 30	225 39	30,2	54 1/2	54		S. S. W.	
δ	20.	54	35 19	225 36	30,15	55	53		S. E.	Brisk wind, and flying clouds.
δ	21.	58	32 45	224 36	29,6	59	57		East.	Strong wind, with rain.
u	22.	62	31 03	224 36	29,75	64	63		S. S. W.	Brisk wind, with showers.
♀	23.	62	29 21	224 13	29,9	64	64		N. W. by N.	Moderate wind, with drizz. rain.
h	24.	64	29 43	222 49	29,9	65	65		N. N. W.	Strong wind, and much rain.
○	25.	66	29 46	223 05	29,65	64	66		N. W.	Brisk wind, ditto.
○	26.	66	28 53	225 14	30,0	68	67		N. W. by W.	Moderate wind, and fair weath.
δ	27.	67	27 55	225 14	30,0	69	67		W. S. W.	Little wind, and ditto.
δ	28.	67	27 42	224 40	30,1	69	68		N. by W.	
u	29.	67 1/2	27 31	223 50	30,0	70	69		N. W.	Little wind, and fair; rain in the night.
♀	30.	69	27 03 1/2	224 44	30,0	71	68		N. N. W.	
h	31.	69	26 19 1/2	225 09	29,75	67	67		W. by N.	Brisk wind, with showers.
○	Aug. 1.	68	25 11	225 57	29,8	67	66		W. N. W.	
○	2.	67	23 14	226 11	30,05	70	68		W. by S.	Moderate W. with flying clouds.
δ	3.	71	22 11	226 59	30,15	72	67		West.	Little wind, and fine weather.
δ	4.	72	21 22	227 10	30,05	75	75		Ditto.	
u	5.	73	20 39	227 50 1/2	30,15	77	77		N. W.	Little wind, and cloudy.
♀	6.	76	19 46	228 35	30,05	77	78		West.	
h	7.	78	18 52	227 21	30,15	71	76		E. S. E.	Brisk wind, and cloudy.
○	8.	76	18 04	224 47	30,05	76	75		Ditto.	
○	9.	75	17 41	222 36	30,25	75	74		E. by S.	Gentle gales, and flying clouds.
δ	10.	75 1/2	17 23	220 33	30,25	78 1/2	75		Ditto.	
δ	11.	77 1/2	17 16 1/2	218 29	30,1	79	76		East.	Gentle gales, and hazy.
u	12.	77	17 10	216 10	30,0	79 1/2	77		E. by S.	
♀	13.	78 1/2	17 15	215 11	30,1	80	78		Ditto.	Little wind, and fair weather.
h	14.	79	17 18	212 50	30,0	79 1/2	77		Ditto.	
○	15.	78 1/2	17 46	211 05	30,05	80	77		Ditto.	Little wind, and fair weather.
○	16.	78 1/2	17 46		30,1	82	84		S. by E.	

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1773:		Morn.	Noon.		Even.		Wind.	Weather, &c.
		Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.	Baro- meter.	Thermom. Ther- mo- meter.		
♂	Aug. 17.	81	17 39 $\frac{1}{2}$		30,0	82	East.	Little wind, and cloudy.
♀	— 18.	84	17 44 $\frac{1}{2}$	210 36	30,05	82	Ditto.	Ditto, and fair weather.
♂	— 19.	83	In Oaitipeha Bay, on the N. W. side of the lesser peninsula of Ota- heite.		30,1	82	Ditto.	Brisk wind, with showers.
♀	— 20.	82			30,0	82 $\frac{1}{2}$	E. by S.	Brisk, and flying clouds.
♂	— 21.	80 $\frac{1}{2}$			29,95	81 $\frac{1}{2}$	N. E.	
♀	— 22.	78			29,85	81	N. N. W.	
♂	— 23.	77			30,0	78	W. by S.	Moderate wind, with showers.
♀	— 24.	75			30,05	75	S. W. by W.	
♂	— 25.	74	17 24 $\frac{1}{2}$	210 34	30,0	80 $\frac{1}{2}$	E. S. E.	Light winds, and fine weather.
♀	— 26.	72	In Matavi Bay, Otaheite.		30,1	81 $\frac{1}{2}$	Ditto.	
♂	— 27.		17 29				Ditto.	
♀	— 28.		210 23				Ditto.	
♂	— 29.						Ditto.	
♀	— 30.						Ditto.	Gentle breezes, and fine wea- ther.
♂	— 31.						Ditto.	
♀	Sept. 1.						West.	
♂	— 2.	76 $\frac{1}{2}$	16 59 $\frac{1}{2}$	209 38 $\frac{1}{2}$	30,0	77	S. E.	
♀	— 3.	75	16 45	209 0	30,0	77	Ditto.	
♂	— 4.	76	At anchor in Ow- harre Harbour, in Huaheine.		30,1	78 $\frac{1}{2}$	E. S. E.	Little wind, and drizzling rain.
♀	— 5.	77			30,0	79 $\frac{1}{2}$	Ditto.	
♂	— 6.	77 $\frac{1}{2}$			30,0	78	Ditto.	
♀	— 7.	77 $\frac{1}{2}$			30,05	80	Ditto.	
♂	— 8.	78			30,0	81	Ditto.	
♀	— 9.	77 $\frac{1}{2}$	At anchor in Oha- manens Harbour, in Uliateah.		30,0	80 $\frac{1}{2}$	Ditto.	Brisk wind, and flying clouds.
♂	— 10.	76			30,1	82 $\frac{1}{2}$	Ditto.	
♀	— 11.	77			30,0	82	W. S. W.	
♂	— 12.	76			30,0	77	E. S. E.	
♀	— 13.	76 $\frac{1}{2}$			30,16	78 $\frac{1}{2}$	Ditto.	
♂	— 14.	77			30,14	77 $\frac{1}{2}$	E. by N.	Moderate wind, and fair weather.
♀	— 15.	74 $\frac{1}{2}$			30,13	77 $\frac{1}{2}$	E. by S.	
♂	— 16.	75 $\frac{1}{2}$			30,11	77 $\frac{1}{2}$	E. S. E.	
♀	— 17.	76 $\frac{1}{2}$			30,05	78	Ditto.	
♂	— 18.	76 $\frac{1}{2}$	16 50 $\frac{1}{2}$	208 11	29,9	78 $\frac{1}{2}$	E. by S.	
♀	— 19.	77 $\frac{1}{2}$	17 16	207 02	29,95	78 $\frac{1}{2}$	East.	Moderate winds, and showers. Ditto, and flying clouds.
♂	— 20.	76 $\frac{1}{2}$	18 02	204 50	30,0	80 $\frac{1}{2}$	E. by N.	
♀	— 21.	78 $\frac{1}{2}$	18 24	204 25	29,9	80	N. W.	
♂	— 22.	78	18 40	203 31	30,0	77	S. S. E.	
♀	— 23.	72 $\frac{1}{2}$	19 06	201 58	30,0	74	S. E. by S.	
♂	— 24.	73 $\frac{1}{2}$	19 28 $\frac{1}{2}$	200 20	30,05	74 $\frac{1}{2}$	E. S. E.	Brisk wind, and cloudy.
♀	— 25.	74 $\frac{1}{2}$	19 52	97 40	30,05	74 $\frac{1}{2}$	Ditto.	Ditto, with drizzling rain.
♂	— 26.	73	20 25	95 26	30,95	73 $\frac{1}{2}$	Ditto.	Ditto, with flying clouds.
♀	— 27.	70 $\frac{1}{2}$	20 39	193 09	30,95	72 $\frac{1}{2}$	Ditto.	Brisk wind, and cloudy.
♂	— 28.	72	21 04	90 03	30,0	74	E. by S.	

1773.		Morn.		Noon.		Even.		Wind.	Weather, &c.
		Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.	Baro- meter.	Ther- mom- eter.	Ther- mo- meter.		
Sept. 29.	72	21	28 $\frac{1}{2}$	188 36	30,1	72	71	E. by S.	Moderate wind and flying clouds.
30.	70 $\frac{1}{2}$	21	12		30,0	70	68 $\frac{1}{2}$	S. E. by E.	
Oct. 1.	69	21	20 $\frac{1}{2}$	185 40	30,0	72	69	Ditto.	Moderate wind, and cloudy.
2.	70 $\frac{1}{2}$	21	21 $\frac{1}{2}$		30,15	71 $\frac{1}{2}$	68 $\frac{1}{2}$	E. N. E.	
3.	71	21	04		30,0	71 $\frac{1}{2}$	72	Ditto.	Ditto.
4.	70 $\frac{1}{2}$	21	4	185 10	30,05	72 $\frac{1}{2}$	70	Ditto.	
5.	66 $\frac{1}{2}$	At Tongatabu, one of the Friendly Islands.			30,0	71	70	E. by N.	Brisk wind, with showers.
6.	67	21	4 $\frac{9}{10}$		29,95	73	71	Ditto.	Gentle gales, with clouds.
7.	69	21	4 $\frac{2}{3}$		30,0	71 $\frac{1}{2}$	71	E. S. E.	
8.	71	22	1 $\frac{1}{3}$	185 02	29,95	71 $\frac{1}{2}$	70	S. W. by S.	Little wind, and cloudy.
9.	70	22	25 $\frac{1}{2}$	185 28	30,0	71	69	S. S. W.	
10.	69	22	45	184 15	30,05	69	67	S. E. by S.	Brisk wind, and fair weather.
11.	67	23	54	183 0	30,0	68	67	S. E. by E.	
12.	68	25	31	181 43	30,2	68	66	East.	Moderate wind, and ditto.
13.	67	27	11 $\frac{1}{2}$	180 56	30,2	68	67	E. by S.	
14.	66	28	42	180 14	30,1	66	65	East.	Moderate wind, and cloudy.
15.	65 $\frac{1}{2}$	30	15	179 47	30,2	67 $\frac{1}{2}$	65	E. by N.	
16.	64	31	38 $\frac{1}{2}$	179 45	30,2	66 $\frac{1}{2}$	65	East.	Moderate wind, and fine weather.
17.	65	32	43	179 58	30,2	67 $\frac{1}{2}$	65 $\frac{1}{2}$	N. E.	
18.	65	33	47 $\frac{1}{2}$	180 05	30,0	67	64 $\frac{1}{2}$	N. N. E.	Light winds, and fair weather.
19.	64 $\frac{1}{2}$	35	54 $\frac{1}{2}$	180 21	29,15	65 $\frac{1}{2}$	64	North.	
20.	58	37	44 $\frac{2}{3}$	179 45	29,65	60	59	West.	Brisk gales, with rain.
21.	58	39	06 $\frac{1}{2}$	178 26	29,25	64	60	N. W.	
22.	56	40	15	176 30	29,2	59	57	North.	Strong wind, in squalls.
23.	55	40	53 $\frac{1}{2}$	176 05	29,55	56	56	S. S. W. $\frac{1}{2}$ W.	
24.	56	41	30	175 28	29,3	61	55 $\frac{1}{2}$	W. N. W.	Strong wind, and cloudy weather.
25.	54	42	18	174 58	29,25	60	56	N. W.	
26.	55	42	33	174 42	29,6	54 $\frac{1}{2}$	51	South.	Ditto, and fair weather.
27.	54 $\frac{1}{2}$	42	17	174 33	29,65	56	54	N. W.	
28.	54	42	18	175 10	29,25	56	54	Ditto.	Moderate wind, and ditto.
29.	53 $\frac{1}{2}$	41	50	175 33	29,65	53	53	W. by N.	
30.	54	41	53	175 29	29,55	60	54	N. W.	Strong wind, and hazy.
31.	59	42	32	175 41	29,7	64 $\frac{1}{2}$	55	N. N. W.	
Nov. 1.	58	42	52	175 45	29,15	61	54	N. N. W.	Ditto, and fair weather.
2.	58	41	37	176 0	29,65	57	52	W. by N.	
3.	53	41	20	175 30	29,75	53	54	S. S. W.	Little wind, and rain.
4.	54	41	40	175 0	29,7	60 $\frac{1}{2}$	59	N. W. by W.	
5.	56	41	34	175 10	29,65	51	54	S. W.	Light winds, and fair weather.
6.	54	41	37	175 57	29,6	52	53	South.	
7.	53	39	41	177 25	29,75	53	53	S. by W.	Strong wind, and heavy rain.
8.	60	39	01 $\frac{1}{2}$	177 51	29,75	63	54	W. by N.	
9.	56	38	21 $\frac{1}{2}$	178 33 $\frac{3}{4}$	29,65	57	57	S. by W.	Ditto, with drizzling rain.
									Moderate wind, and fair weather.

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1773.	Morn. Ther- mo- meter.	Noon.			Even. Ther- mo- meter.	Wind.	Weather, &c.
		Latitude South.	Longitude East of Green- wich.	Baro- meter.			
8 Nov. 10.	59			29,85	57	S. S. E.	Moderate wind, and fair weather.
11.	56	At anchor in To- laga Bay.		29,8	57	South.	
12.	56			30,1	59	S. E.	Strong wind, and squally.
13.	52			30,1	58½	S. E. by E.	
14.	57			30,2	61	E. S. E.	Moderate winds, and fair weather.
15.	56			29,95	60½	S. S. E.	
16.	54	38 31½	178 37	29,65	64	N. N. E.	Moderate winds, and fair weather.
17.	62½	39 42	178 07	29,6	67	N. W.	
18.	63	39 59	177 45½	29,6	68	W. N. W.	Little winds, with squally weather.
19.	62	40 39	177 09	29,55	68	{ N. W. W. by S. }	
20.	64	41 03	175 50	29,8	56	Variable.	Little winds, and cloudy.
21.	54	41 05	175 40	29,75	55	South.	Strong wind, with rain at times.
22.	52	41 04	176 25	30,1	55	S. S. W.	Moderate wind, with flying clouds.
23.	58	40 54	175 53	30,2	61½	S. E.	Little wind, and fair weather.
24.	57	41 36	175 0	30,3	61½	N. E.	
25.	56½			30,0	56	N. N. W.	Strong wind, and hazy.
26.	56			30,15	58	Ditto.	Moderate wind, with rain.
27.	56	41 57	174 45	29,9	61	Ditto.	Strong wind, with rain.
28.	58			30,2	62½	Ditto.	Light airs, and hazy.
29.	57½	42 07	174 50	29,85	60	S. W.	
30.	54			30,15	57½	S. by W.	Moderate wind, and fine weather.
1 Dec. 1.	56			30,22	63½	South.	
2.	56			30,08	66	N. W.	Squally, with drizzling rain.
3.	57			30,02	67½	Variable.	
4.	56			29,8	59	N. N. W.	Strong wind, and much rain.
5.	54	On shore in Queen Charlotte's Sound.		29,8	69	North.	
6.	55			29,7	68	Variable.	Moderate wind, and fair weather.
7.	57			29,96	68½	N. W.	
8.	51			30,46	69	N. N. W.	Little wind, and fair weather.
9.	59			30,4	69½	W. N. W.	
10.	64			30,57	69	Variable.	Little wind, and fine weather.
11.	60½			30,48	73½	N. W.	Little wind, and fine weather.
12.	63			30,39	73½	Ditto.	Brisk wind, and fine weather.
13.	61			30,30	73½	Ditto.	
14.	61			30,38	74	Variable.	Moderate wind, and cloudy.
15.	59			30,26	64	N. N. E.	Gentle breezes, and fair weather.
16.	57			30,20	65	S. S. W.	Brisk wind, and squally.
17.	54			30,0	66	N. E.	Gentle breezes, and fair weather.
18.	65			29,92	64	N. W.	
19.	61			29,96	66½	Variable.	Strong gales in squalls, & cloudy.
20.	61½			29,94	65½	N. N. E.	
21.	61			29,65	63	N. W. by N.	Brisk gales, and hazy.
22.	65			29,8	65½	Ditto.	

1773.	Morn.	Noon.				Even.	Winds.	Weather, &c.
		Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.	Baro- meter.	Ther- mo- meter.		
u Dec. 23.	64	42 25 $\frac{1}{2}$	175 10	30,1	66	65 $\frac{1}{2}$	N. W.	} Little wind, and fine weather.
q — 24.	61 $\frac{1}{2}$	43 0 $\frac{1}{2}$	175 0	30,15	64 $\frac{1}{2}$	62	E. N. E.	
h — 25.	59 $\frac{1}{2}$	44 39	175 56	30,2	62	61 $\frac{1}{2}$	N. E.	} Little wind, and foggy.
o — 26.	57	45 43	176 59	29, 57	60	60	S. by E.	
d — 27.	57	46 25	177 44	29,75	58	56	Ditto.	} Little wind, and foggy, with drizzling rain.
s — 28.	52	47 05	178 32	30,05	54	54	Variable.	
q — 29.	52	48 07 $\frac{1}{2}$	178 56	29,9	54	54	N. E. by E.	Brisk wind, and cloudy.
u — 30.	51	49 33	179 37	29,4	56	51	Variable.	Little wind, and thick fog.
q — 31.	50	50 36	179 50	28,95	48	50	S. S. E.	Strong wind, and much rain.
1774.								
h Jan. 1.	45	50 37	180 55	29,75	46	41	South.	Brisk wind, and flying clouds.
o — 2.	41	51 37	183 11	30,05	48	42	W. by S.	Ditto, and cloudy.
d — 3.	49	53 11	186 18	29,7	49 $\frac{1}{2}$	49	West.	Strong wind, and thick, with rain.
s — 4.	49	54 41	189 27	29,25	46	46	Ditto.	Moderate wind, and heavy rain.
q — 5.	43	55 29	192 42	29,4	46	45	W. S. W.	Brisk wind, and flying clouds.
u — 6.	38 $\frac{1}{2}$	56 27	196 7 $\frac{1}{2}$	29,4	41	40	S. by W.	Ditto, with squally weather.
q — 7.	38	56 57	199 42 $\frac{1}{2}$	29,6	38	37	Ditto.	Ditto, with fleet.
h — 8.	38	57 06	202 47	29,7	40	36 $\frac{1}{2}$	S. by E.	} Moderate wind, with showers.
o — 9.	36	57 29	206 06	29,65	38	37	S. S. W.	
d — 10.	37 $\frac{1}{2}$	57 56	208 48	29,25	37 $\frac{1}{2}$	36	W. by S.	Little wind, and thick, with rain.
s — 11.	35	58 18	212 47	28,65	36	36	W. S. W.	Moderate wind, with snow at times.
q — 12.	35	58 40 $\frac{3}{4}$	215 20	28,5	38	36	S. W.	Light winds, and cloudy.
u — 13.	36	58 45	216 39	28,55	41	37	Variable.	Ditto, with snow.
q — 14.	37	58 45	217 50	28,55	37	38	W. S. W.	Little wind, with drizzling rain.
h — 15.	39 $\frac{1}{2}$	58 48 $\frac{1}{2}$	221 46	29,0	38 $\frac{1}{2}$	38 $\frac{1}{2}$	West.	Brisk wind, with snow at times.
o — 16.	39	58 50 $\frac{1}{2}$	225 40	29,5	40	40	Ditto.	} Brisk winds, with snow.
d — 17.	39	59 5 $\frac{1}{2}$	229 31	29,7	43	41	Ditto.	
s — 18.	39	59 11	234 37	29,4	41	41 $\frac{1}{2}$	N. W.	Strong wind, with showers.
q — 19.	42	59 25	241 05	28,75	41	40	W. N. W.	Ditto, and flying clouds.
u — 20.	43	59 52	245 39	28,45	41 $\frac{1}{2}$	42	N. N. W.	Moderate wind, and thin clouds.
q — 21.	38	60 9 $\frac{2}{3}$	247 20	28,35	41 $\frac{1}{2}$	40	S. E. by S.	Little wind, and cloudy.
h — 22.	40	59 31	249 07	28,75	42 $\frac{1}{2}$	40	S. $\frac{1}{2}$ E.	Little wind, and flying clouds.
o — 23.	40	59 15	251 54	28,5	42	41	S. by E.	Brisk wind, and squally at times.
d — 24.	41	59 33 $\frac{1}{2}$	255 26	28,85	38 $\frac{1}{2}$	40		Little wind, and hazy.
s — 25.	43	60 18	259 30	29,2	43	42	North.	Brisk wind, and very hazy.
q — 26.	41 $\frac{1}{2}$	60 48	263 02	29,55	43	42	N. N. W.	Brisk wind, and foggy, with rain.
u — 27.	41	61 13	266 45	29,3	41 $\frac{1}{2}$	41 $\frac{1}{2}$	N. W.	Little wind, and very foggy.
q — 28.	41	61 46	270 50	29,05	42	41	W. N. W.	Brisk wind, and foggy at times.
h — 29.	41	61 50	275 34	29,3	42	42	N. N. W.	Ditto, and cloudy, with showers.
o — 30.	43 $\frac{1}{2}$	61 34 $\frac{1}{2}$	280 40	29,35	41	41 $\frac{1}{2}$	W. N. W.	Brisk wind, and fair weather.
d — 31.	41	61 20	287 44	29,45	39 $\frac{1}{2}$	41 $\frac{1}{2}$	N. W. by N.	Moderate wind, and heavy rain.
s Feb. 1.	41	61 02	291 31	29,4	41	41 $\frac{1}{2}$	W. N. W.	Brisk wind, and thick, with rain.
q — 2.	41	60 44 $\frac{2}{3}$	295 55	29,25	42	41	Ditto.	Moderate wind, and cloudy.
u — 3.	41	60 36	302 47	29,6	41	41	W. by N.	Brisk wind, with rain.

1774.		Morn.		Noon.			Thermom.	Even.	Ther- mo- meter.	Winds.	Weather, &c.
		Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.	Baro- meter.						
♀ Feb.	4.	36	60 32	307 06	29,65	39	37	N. W.	} Moderate wind, and hazy.		
h	5.	37	60 18	310 58	29,55	37	37½	N. N. W.			
○	6.	36½	60 16	312 40	28,9	38	35	E. N. E.	Brisk winds, with snow at times.		
▷	7.	35	59 17	315 02	29,35	41	36	S. E.	Little winds, and hazy.		
♂	8.	37	58 30	317 20	29,8	37½	37	N. W.	Brisk winds, ditto.		
♀	9.	35	57 20	320 18	29,85	37½	38	S. W.	Moderate wind, and foggy.		
▷	10.	39½	56 58	322 3	30,05	41½	38½	N. N. W.	} Ditto, and cloudy.		
♀	11.	39	56 22	324 24	29,85	41	39½	Ditto.			
h	12.	41	55 28	325 47	29,3	40	36½	N. W. by W.	Strong wind, with drizzling rain.		
○	13.	38	54 38	327 56½	29,35	41	39	N. W.	Brisk wind, with thick fog.		
▷	14.	38½	54 22	330 0	29,6	42	40	N. N. W.	Little wind, ditto.		
♂	15.	39	54 11	333 0	29,3	40½	39	N. W.	Brisk wind, ditto.		
♀	16.	38½	54 02	336 09	29,2	39½	38½	S. E.	Moderate wind, & foggy, with rain.		
▷	17.	39	54 10	338 57	29,55	38	38	N. E.	Moderate wind, and thick clouds.		
♀	18.	40	54 12	340 16	29,35	40	40	North.	Little wind, foggy, with rain.		
h	19.	39	54 0	341 57	28,95	40	37	E. S. E.	Brisk wind, and foggy weather.		
○	20.	36	53 20	343 56	29,65	37	38	S. W. by S.	Ditto, cloudy.		
▷	21.	39	53 24	346 50	29,1	39½	38½	W. S. W.	Ditto, squally.		
♂	22.	37	53 11	349 37	29,95	40	39	West.	Light winds, and fine weather.		
♀	23.	38½	53 04	352 29	29,7	39	39	West.	Brisk wind, and thick weather.		
▷	24.	40	52 47	355 43	29,45	39	39½	W. N. W.	Strong wind, and foggy.		
♀	25.	39	53 16	358 17	29,3	38½	38	West.	Ditto, with snow.		
h	26.	37	53 35	0 3	29,2	33	36	E. S. E.	Little wind, ditto.		
Here, having made a complete revolution round the Globe, 360° of Longitude were dropped, and a day repeated. Saw the Southern lights, but not very bright.											
h	26.	37	53 27	3 8	29,6	37	37	W. by S.	Brisk wind, and fine weather.		
○	27.	35	53 54	5 27	29,7	40	34	North.	Little wind, and hazy.		
▷	28.	34	54 0	5 52½	29,0	35	36	E. S. E.	Ditto, snow and rain.		
♂ March	1.	34½	53 46	7 41	29,15	35½	34	N. W.	Brisk wind, snow and rain.		
♀	2.	35	54 4	9 51	29,2	35½	34½	W. N. W.	Ditto, cloudy.		
▷	3.	34	53 18	11 40	29,45	35	34½	West.	Ditto, fair.		
♀	4.	37	52 42	11 31	29,0	39½	36	N. W. by N.	Strong wind, and heavy rain.		
h	5.	37	50 44½	12 39	29,9	38	39	N. N. W.	Ditto, cloudy.		
○	6.	43	49 55	14 30	29,6	42	40	Ditto.	Ditto, rain.		
▷	7.	38	48 32	14 1	29,85	41	39	West.	Little wind, and flying clouds.		
♂	8.	38	47 37	13 52	29,95	40	38	N. W. by N.	Brisk wind, and cloudy.		
♀	9.	45½	45 41	14 27½	29,85	47½	46	W. by N.	Strong wind, with squalls of rain.		
▷	10.	47½	43 14	14 50	29,7	50	49	W. S. W.	Brisk wind, and flying clouds.		
♀	11.	47½	41 48	14 19	30,05	55	58	S. S. W.	Little wind, and cloudy.		
h	12.	61½	41 16	14 34	29,6	62	58	N. N. W.	Brisk wind, with rain.		
○	13.	64	39 59	15 14	29,6	60	61	W. by N.	Little wind, and fair weather.		
▷	14.	64½	37 32½	16 4	29,7	65½	62	W. S. W.	Brisk wind, and ditto.		
♂	15.	65½	35 31½	16 4	30,20	69	68	S. W.	} Little wind, and fine weather.		
♀	16.	67	34 37	16 51	30,05	69½	68½	S. E. by S.			

1774.		Morn.	Noon.			Even.		Winds.	Weather, &c.
		Ther- mo- meter.	Latitude South.	Longitude East of Green- wich.	Baro- meter.	Ther- mom.			
			o	o					
24	Mar. 17.	68 $\frac{1}{2}$	34 13	17 42	30,0	69 $\frac{1}{2}$	69	W. S. W.	Little wind, and fine weather.
♀	18.	68 $\frac{1}{2}$			29,95	61	67	N. E. by N.	Little wind, and thick fog.
h	19.	68	At the Cape of Good Hope.		29,90	72	66	N. N. W.	Little wind, and clear.
o	20.	69			30,05	61	67	W. by N.	Strong wind, and squally weath.
D	21.	62			30,02	62	61	N. by W.	Little wind, and fine weather.
♂	22.				29,96	70		East.	
♀	23.				29,92	70 $\frac{1}{2}$		E. by S.	
24	24.				30,0	70		Ditto.	
♀	25.				30,1	68		S. E.	Strong wind, and clear weather.
h	26.				30,04	68		N. W.	Little wind, and fine weather.
o	27.				30,11	65 $\frac{1}{2}$		Ditto.	Brisk wind, with rain.
D	28.				30,18	63		S. E.	Strong wind, and flying clouds.
♂	29.				30,1	63 $\frac{1}{2}$		Ditto.	Ditto, and hazy.
♀	30.				30,13	66		N. W.	Little wind, and fine weather.
24	31.				29,95	68		Variable.	
♀	April 1.				30,0	68		North.	Little wind, and hazy.
h	2.				30,06	65		E. by S.	
o	3.				30,08	64 $\frac{1}{2}$		N. W.	Little wind, and fine weather.
D	4.				30,08	67		Ditto.	
♂	5.				30,1	66		E. N. E.	Strong wind, and ditto.
♀	6.				30,0	72		S. E.	Strong wind, and hazy weather.
24	7.				30,04	69		Ditto.	
♀	8.				30,04	67		Ditto.	
h	9.				29,99	67		Ditto.	
o	10.				29,89	67		Ditto.	Ditto, and fine weather.
D	11.							Ditto.	
♂	12.							E. S. E.	Little wind, and cloudy.
♀	13.							N. W.	Brisk wind, and flying clouds.
24	14.							Ditto.	Little wind, and fine weather.
♀	15.	66			30,1	67 $\frac{1}{2}$		E. S. E.	
h	16.				30,1		72	N. N. W.	
o	17.	64	33 13	17 31	30,15	65	66	S. S. E.	
D	18.	67	32 49	16 54	29,8	64	67	Variable.	Little wind, and much rain.
♂	19.	64	33 5	16 7	29,9	66	69	N. N. W.	Ditto, and flying clouds.
♀	20.	64	32 34	16 7	30,1	71	64	S. S. E.	Ditto, and fine weather.
24	21.	63 $\frac{1}{2}$	31 13 $\frac{1}{2}$	14 20	29,85	70	65	Ditto.	Brisk wind, and ditto.
♀	22.	63 $\frac{1}{2}$	30 16	13 0	29,85	66 $\frac{1}{2}$	64	W. N. W.	Little wind, and ditto.
h	23.	65	29 15	13 23 $\frac{1}{2}$	30,0	66	64	N. W. by W.	Ditto, and flying clouds.
o	24.	66	27 44 $\frac{1}{2}$	11 43	30,0	66	65	South.	Brisk wind, and flying clouds.
D	25.	65	26 13	9 36	29,9	67	66	E. S. E.	
♂	26.	66	24 57	8 28	30,0	69 $\frac{1}{2}$	67	S. S. E.	Little wind, and fine weather.
♀	27.	60	23 48	7 12	29,9	70	67	S. S. W.	
24	28.	66 $\frac{1}{2}$	22 49	6 19	29,9	69 $\frac{1}{2}$	67	South.	
♀	29.	69 $\frac{1}{2}$	21 53	5 18	29,9	75	68	S. E. by E.	

1774:		Morn.		Noon.			Even.		Winds.	Weather, &c.
		Ther- mo- meter.	Latitude	Longitude	Baro- meter.	Ther- mom.	Ther- mo- meter.			
			South.	East of Green- wich.						
			°	°						
h	April 30.	69	21 22	3 31	30,1	77 $\frac{1}{2}$	67	S. E. by E.	} Little wind, and fine weather.	
o	May 1.	69	20 52	2 40 $\frac{1}{2}$	30,1	74	69	S. E.		
D	— 2.	69	20 22 $\frac{1}{2}$	1 57	29,9	70 $\frac{1}{2}$	68	S. W.		
8	— 3.	69 $\frac{1}{2}$	19 32 $\frac{3}{4}$	1 13	30,0	74 $\frac{1}{2}$	69	W. S. W.		
8	— 4.	70	19 27	0 50	30,0	76	69 $\frac{1}{2}$	S. S. E.		
4	— 5.	71 $\frac{1}{2}$	18 47 $\frac{1}{2}$	0 0	30,05	73 $\frac{1}{2}$	69	S. E.	} Brisk winds, and fine weather.	
				West.						
2	— 6.	70 $\frac{1}{2}$	17 40	1 29	30,0	73 $\frac{1}{2}$	69 $\frac{1}{2}$	Ditto.		
h	— 7.	71 $\frac{1}{2}$	16 49	2 37	29,95	75	69	S. S. E.		
o	— 8.	71 $\frac{1}{2}$	15 48	3 38	30,0	74 $\frac{1}{2}$	69	S. E.		
D	— 9.	71 $\frac{1}{2}$	14 49	4 54	30,15	73	70	Ditto.	} Brisk wind, and cloudy.	
8	— 10.	73	13 22 $\frac{1}{3}$	6 34	30,15	75	71	Ditto.		
8	— 11.	74	12 2 $\frac{1}{2}$	8 8 $\frac{1}{2}$	29,8	77 $\frac{1}{2}$	72	S. E. by S.	} Little wind, ditto.	
4	— 12.	75	10 43	9 26	30,0	77	73	S. S. E.		
2	— 13.	76	9 14	10 59	29,95	80	74	S. E.	} Brisk wind, and flying clouds.	
h	— 14.	75	7 55 $\frac{1}{2}$	12 30	30,0	80 $\frac{1}{2}$	77	Ditto.		
o	— 15.	78	6 33 $\frac{1}{2}$	14 17	29,85	81 $\frac{1}{2}$	81 $\frac{1}{2}$	Ditto.	} Brisk winds, and fine weather.	
D	— 16.	78 $\frac{1}{2}$	5 14	15 45	29,9	82 $\frac{1}{2}$	82	Ditto.		
8	— 17.	79 $\frac{1}{2}$	4 0 $\frac{1}{2}$	17 10	29,9	78 $\frac{1}{2}$	80 $\frac{1}{2}$	S. E. by E.	} Brisk wind, with showers.	
8	— 18.	78 $\frac{1}{2}$	2 35 $\frac{1}{3}$	19 2	30,0	81 $\frac{1}{2}$	80	S. E.		
4	— 19.	77	0 58 $\frac{3}{4}$	19 55	30,0	80	78 $\frac{1}{2}$	Ditto.	} Brisk wind, and fine weather.	
			North.							
2	— 20.	76	0 21	20 35	29,9	80	77	S. E. by S.	} Little wind, and cloudy.	
h	— 21.	77	1 24 $\frac{1}{2}$	21 0 $\frac{1}{2}$	30,0	80	78 $\frac{1}{2}$	S. by E.		
o	— 22.	80	2 54 $\frac{1}{2}$	21 32	29,95	82 $\frac{1}{2}$	80	S. S. E.	} Gentle breezes, and fine weather.	
D	— 23.	79	4 5	22 1	30,0	83	80	N. E.		
8	— 24.	78	4 37	22 17	29,95	79	80	E. S. E.	} Light winds, with showers.	
8	— 25.	78 $\frac{1}{2}$	5 27	22 17	30,1	82	79	E. by N.		
4	— 26.	79	5 56	22 52	29,95	82	79 $\frac{1}{2}$	N. E.	} Light winds, and fine weather.	
2	— 27.	77	5 59 $\frac{1}{4}$	24 34	30,0	81 $\frac{1}{2}$	79	Calm.		
h	— 28.	75	6 11 $\frac{1}{2}$	24 57	29,9	81	80	S. by W.	} Cloudy, with heavy showers.	
o	— 29.	75	6 38	25 33	29,95	79	75	Calm.		
D	— 30.	75	6 41	25 0	30,0	76	75	Variable.	} Little wind, and heavy rain.	
8	— 31.	77	6 37	25 20	30,0	79 $\frac{1}{2}$	76	Ditto.		
8	June 1.	79 $\frac{1}{2}$	6 48	24 57	30,0	81 $\frac{1}{2}$	78	Ditto.	} Little wind, and fair weather.	
4	— 2.	79	7 7 $\frac{1}{2}$	25 37 $\frac{1}{2}$	30,0	80 $\frac{1}{2}$	79	N. N. E.		
2	— 3.	79 $\frac{1}{2}$	7 11	25 50	30,0	81	79	Ditto.	} Brisk wind, with rain.	
h	— 4.	78 $\frac{1}{2}$	7 39	26 45	30,0	80	78 $\frac{1}{2}$	N. E. by N.		
o	— 5.	77 $\frac{1}{2}$	7 59	27 11	30,0	79 $\frac{1}{2}$	79	North.	} Light winds, and clear weather.	
D	— 6.	77	8 14	27 54	30,0	81	78	N. E. by E.		
8	— 7.	78	9 15	28 51	30,0	80	79	Ditto.	} Little wind, and fine weather.	
8	— 8.	77	10 29	30 06	29,9	79 $\frac{1}{2}$	77	Ditto.		
4	— 9.	77	11 51	31 12	29,95	79 $\frac{1}{2}$	77	Ditto.	} Brisk wind, and flying clouds.	
2	— 10.	76	13 18 $\frac{1}{3}$	32 31	30,05	77 $\frac{1}{2}$	76	N. N. E.		

ON BOARD THE ADVENTURE.

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1774.	Morn.	Noon.				Even.	Winds.	Weather, &c.
		Ther- mo- meter.	Latitude North.	Longitude West of Green- wich.	Baro- meter.	Thermom. meter.		
h June 11.	74	14 42	33 51	30,0	76½	75	N. E.	Brisk wind, and squally.
o — 12.	74	16 23½	34 44	30,0	76	74	Ditto.	} Ditto, and fine weather.
D — 13.	73½	17 44½	35 37	30,0	75	74½	N. E. by E.	
δ — 14.	74	19 13½	36 16	29,95	77	75	E. by N.	Light winds, and flying clouds.
ξ — 15.	75	20 49½	36 37	30,05	76	75	E. N. E.	Squally, with showers of rain.
u — 16.	75	22 22	37 35	30,15	77½	76	N. E. by N.	Light winds, and cloudy.
♀ — 17.	76	23 45	38 23	30,05	79	77½	N. E. by E.	} Gentle breezes, and fair weather.
h — 18.	76	25 9½	39 13	30,25	77½	76	Ditto.	
o — 19.	75	26 34	39 11	30,2	77½	75	E. S. E.	Brisk wind, in squalls.
D — 20.	75½	28 0	39 0	30,3	76½	75½	S. E.	Little wind, and thin clouds.
δ — 21.	74½	29 17½	39 24	30,25	76½	77	E. N. E.	Brisk gales, and squally.
ξ — 22.	75	30 54	39 36	30,3	75	75	East.	} Brisk wind, with showers.
u — 23.	75	32 39½	40 05	30,3	74	74½	E. by N.	
♀ — 24.	72½	34 23½	40 29	30,45	73½	74½	Ditto.	} Gentle winds, and fine weather.
h — 25.	71½	35 56	40 29	30,45	73½	73	Ditto.	
o — 26.	71	37 12	40 20	30,35	72	72	E. S. E.	Little wind, and cloudy.
D — 27.	71	37 45½	39 32	30,3	73	71	S. E. by S.	} Gentle breezes, and fine weather.
δ — 28.	71	37 53	40 10	30,4	76	72	Variable.	
ξ — 29.	72	38 40	39 40	30,4	74½	72½	W. N. W.	
u — 30.	73	39 13	39 0	30,4	76	73	West.	
♀ July 1.	73	40 6	37 24	30,3	74½	73½	N. W. by W.	Brisk wind, and cloudy.
h — 2	69	40 51	35 55	30,15	76	71	East.	Light winds, with rain.
o — 3	70	41 33	35 0	30,1	70½	71½	N. W. by N.	Brisk winds, in squalls.
D — 4	72	42 44	32 32	30,1	72	70	West.	} Brisk wind, and cloudy.
δ — 5	72	44 1	29 57	30,0	71	69	West.	
ξ — 6	67	45 45	27 18	29,8	65	66	S. W.	Strong wind, and squally.
u — 7	56	47 10	23 58	29,85	59	59	W. N. W.	Very strong wind, and ditto.
♀ — 8	57½	48 5¼	20 41	29,9	58	57½	N. W.	Brisk wind, and fine weather.
h — 9	57	49 9	17 19	29,95	57	58	Ditto.	Strong wind, with heavy showers.
o — 10	57	49 22	15 55	29,95	58	57	Ditto.	Little wind, and cloudy.
D — 11	57	49 27½	11 31	30,1	61	56	Ditto.	Ditto, and fine weather.
δ — 12	58	49 35½	8 1	29,9	60	54½	S. W.	Brisk wind, and thick rainy weather.
ξ — 13	57	50 6½	5 20	29,9	57	53	W. N. W.	Little wind, and hazy.
u — 14	55	At Spithead.		29,95	54	66	N. W. ½ N.	Brisk wind, and squally.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

RESEARCH REPORT

NO. 1

1950

BY

JOHN D. COOPER

AND

ROBERT H. FORT

CHICAGO, ILLINOIS

ASTRONOMICAL OBSERVATIONS,

F O R

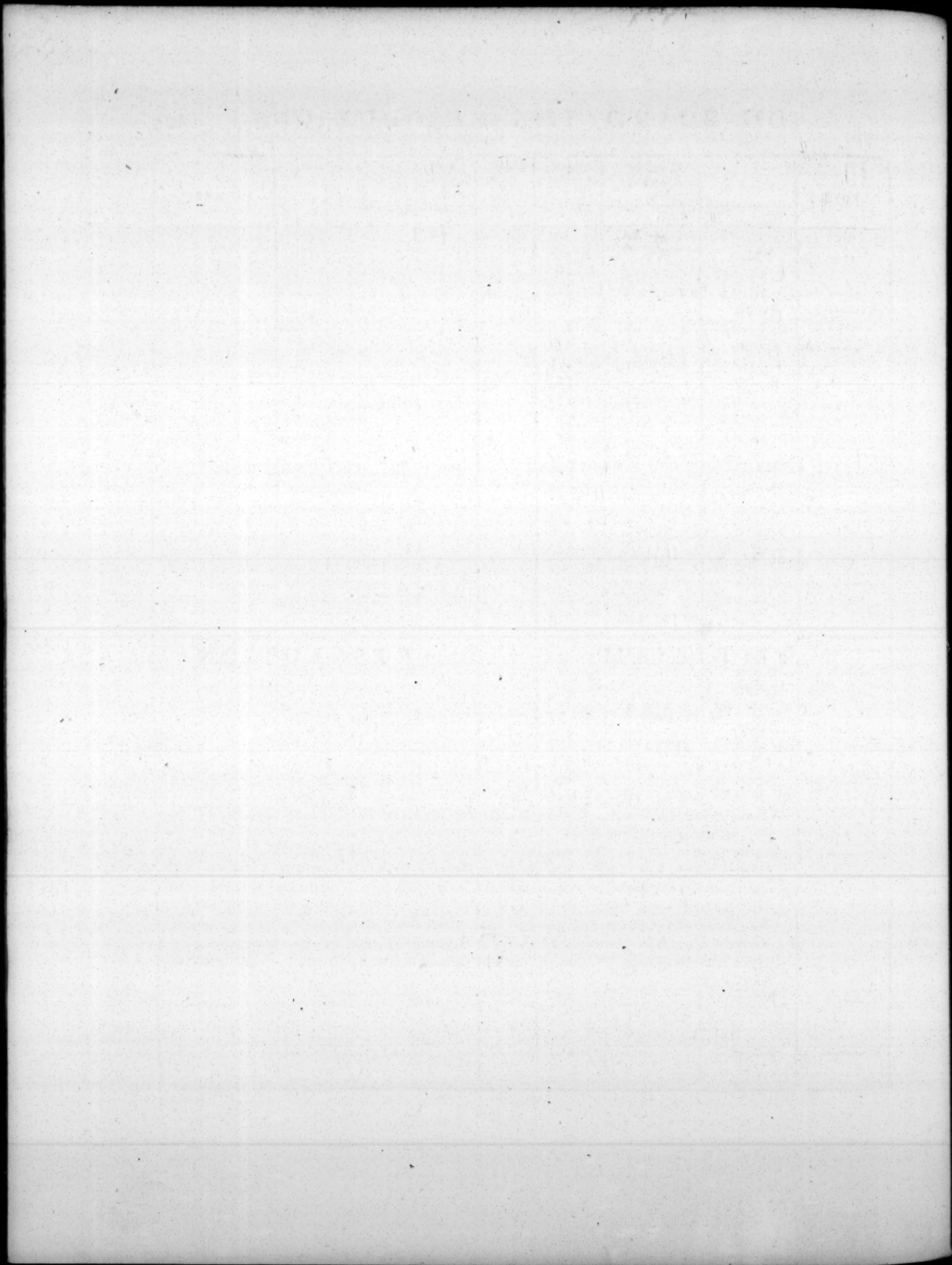
Determining the LATITUDE of the Ship and her LONGITUDE,

BY TWO WATCHES:

One made by Mr. KENDALL, on Mr. HARRISON's PRINCIPLES,
and the other by Mr. ARNOLD.

Made on Board his M A J E S T Y 's Sloop RESOLUTION,

In her late Voyage on Discoveries towards the South.



ON BOARD THE RESOLUTION.

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1772.	Time by Watch K.		Time by Watch A. No. 3.		Altitude of the ☉'s L. L.	Longitude W. by K.	Longitude W. by A.	Latitude North.	Thermom.		No. of Obs.	Remarks.
	H	"	H	"					A.	B.		
○ July 12.	20	19 50 $\frac{3}{4}$	20	17 59 $\frac{3}{4}$	37 39 $\frac{3}{4}$	4 22 $\frac{3}{4}$	4 06 $\frac{3}{4}$	50 15 $\frac{1}{2}$	66	61	3	
○ — 13.	Noon.				61 28 $\frac{1}{2}$				65	61 $\frac{1}{2}$		
	5	24 21 $\frac{1}{2}$	5	22 15	22 56	4 34 $\frac{3}{4}$	4 15	49 44 $\frac{1}{2}$			4	
δ — 14.	20	10 14	20	7 5	35 38	5 4 $\frac{1}{2}$	4 23 $\frac{1}{2}$	49 11			5	
δ — 15.	Noon.				62 25			48 50	65	64		
	4	59 45 $\frac{1}{2}$	4	56 22 $\frac{1}{2}$	27 25 $\frac{1}{2}$			48 34 $\frac{1}{2}$			4	
u — 16.	Noon.				63 37			47 28 $\frac{1}{2}$	63 $\frac{1}{2}$	61		
	4	53 25	4	49 21	29 23 $\frac{1}{2}$			47 14			3	
♀ — 17.	Noon.				64 30 $\frac{1}{2}$			46 24 $\frac{1}{2}$	67	70		
	19	14 01	19	8 54	24 18 $\frac{3}{4}$			46 37 $\frac{1}{2}$			5	
	21	0 24			42 11						3	
	22	45 51			57 42						3	
h — 18.	19	30 49	19	25 0	26 30 $\frac{3}{4}$			45 35 $\frac{1}{2}$	67	63	3	
○ — 19.	Noon.				65 12			45 20	66	64 $\frac{3}{4}$		
○ — 20.	Noon.				66 27 $\frac{1}{2}$			43 54	66 $\frac{1}{2}$	66		
δ — 21.	Noon.				66 40			43 30	67	66		
	19	57 50	19	49 48	29 51			43 41 $\frac{3}{4}$			2	
	21	50 4 $\frac{3}{4}$	21	41 52 $\frac{1}{4}$	49 47			43 40			5	
	22	18 11 $\frac{1}{4}$	22	10 5 $\frac{1}{4}$	54 25 $\frac{3}{4}$			43 38 $\frac{1}{2}$			3	
δ — 22.	Noon.				66 23			43 35	67	65 $\frac{1}{2}$		
	5	18 6 $\frac{3}{4}$	5	9 45 $\frac{3}{4}$	25 41			43 26		69	3	
	19	2 41	18	53 53 $\frac{1}{2}$	19 15 $\frac{1}{2}$			42 41 $\frac{1}{4}$			6	
u — 23.	Noon.				67 28			42 18	65	64 $\frac{1}{2}$		
	19	17 13 $\frac{3}{4}$	19	7 38 $\frac{3}{4}$	20 25 $\frac{1}{4}$			40 32	68	65 $\frac{1}{2}$	5	
♀ — 24.	Noon.				69 31			40 2	67	66 $\frac{1}{2}$		
h — 25.	Noon.				71 40			37 40	70 $\frac{1}{2}$	70		
	6	3 48 $\frac{1}{2}$	5	53 4 $\frac{1}{2}$	19 02			37 6 $\frac{3}{4}$			4	
○ — 26.	Noon.				73 36			35 31 $\frac{1}{2}$	71	72 $\frac{1}{2}$		
	5	32 42 $\frac{3}{4}$	5	21 11	25 45 $\frac{1}{2}$			35 07			5	
	21	56 24 $\frac{1}{2}$	21	44 14 $\frac{1}{2}$	48 50 $\frac{1}{2}$			33 56 $\frac{1}{2}$			4	
○ — 27.	Noon.				75 10			33 43	71	72		
	20	0 18	19	47 18 $\frac{1}{2}$	23 35 $\frac{1}{2}$			32 54	73	72 $\frac{1}{2}$	3	
When the last Observations were taken, the island of <i>Porto Santo</i> bore N. W. by N. distant about four miles.												
δ — 28.	Noon.				75 50			32 48 $\frac{1}{2}$	73	72 $\frac{1}{2}$		
u — 30.	I carried both Time-keepers on shore at Funchial, on the island of Madeira, and compared them with the Astronomical Clock, (see p. 6.) from whence I find that Mr. Kendall's was losing at the rate of 1",77 a day on mean time, and gave the longitude of the place 12° 50' 14" west of Drake's Island, or 17° 6' 22" west of Greenwich. Mr. Arnold's (No. 3.) was losing 56",9 a day on mean time, and gave the longitude 9° 59' 41" west of Drake's Island, or 14° 45' 49" west of Greenwich.											
○ Aug. 2.	Noon.				75 03.			32 21 $\frac{1}{2}$	73 $\frac{1}{2}$	75 $\frac{1}{2}$		
	5	56 28,4	5	38 12,4	21 30 $\frac{1}{10}$			31 52 $\frac{1}{2}$			5	
	20	8 35 $\frac{1}{4}$	19	50 36	23 30 $\frac{1}{2}$			30 14 $\frac{3}{4}$	73 $\frac{1}{2}$	73	3	
○ — 3.	Noon.				77 25 $\frac{1}{2}$			29 42 $\frac{7}{12}$	74 $\frac{1}{2}$	77		

1772.	Time by Watch K.		Time by Watch A. No. 3.		Altitude of the ☉'s L. L.	Longi- tude W. by K.	Longi- tude W. by A.	Latitude North.	Thermom.		No. of Obs.	Remarks.
	H	"	H	"					A.	B.		
♂ Aug. 4.	Noon.				78 15			28 37 $\frac{1}{2}$	74 $\frac{1}{2}$	75		
	3 56 50 $\frac{1}{2}$		3 36 6		48 16 $\frac{2}{3}$			28 28 $\frac{2}{3}$	—	76 $\frac{1}{2}$	6	
	6 43 9		6 22 17 $\frac{1}{2}$		11 56 $\frac{2}{3}$			28 25			3	
♀ — 5.	Noon.				78 40 $\frac{1}{2}$			27 55 $\frac{1}{2}$	74 $\frac{1}{2}$	76		
	4 12 31		—		45 4	18 53 $\frac{3}{8}$		27 38 $\frac{1}{2}$		77 $\frac{1}{2}$	3	
♂ — 6.	Noon.				80 12 $\frac{1}{2}$			26 7 $\frac{1}{2}$	75 $\frac{1}{2}$	78		
	20 23 33		19 59 14 $\frac{2}{3}$		23 50 $\frac{1}{3}$			24 33	74	74 $\frac{1}{2}$	3	
♀ — 7.	Noon.				81 56			24 6 $\frac{1}{2}$	76	79		
	20 1 47		19 36 4 $\frac{1}{2}$		18 9 $\frac{1}{3}$			22 29 $\frac{3}{4}$	73	73	3	
♂ — 8.	Noon.				83 28			22 7	74 $\frac{1}{2}$	79		
	20 20 42 $\frac{2}{3}$		19 53 35 $\frac{2}{3}$		21 21 $\frac{1}{3}$			20 29 $\frac{3}{4}$	74 $\frac{1}{2}$	76	3	
○ — 9.	Noon.				85 22 $\frac{1}{2}$			20 5 $\frac{1}{2}$	75	78		
	20 24 27,4		19 55 52,4		20 45 $\frac{3}{10}$			18 27 $\frac{5}{8}$	75 $\frac{1}{2}$	75 $\frac{1}{2}$	5	
♂ — 10.	Noon.				87 9			18 1	77	79		
	20 42 25		20 12 26		23 56	22 36 $\frac{3}{8}$		16 29	77 $\frac{1}{2}$	78	3	
♂ — 11.	Noon.				88 41			16 10,4	79	82		
	7 4 38		6 34 01 $\frac{1}{2}$		7 22 $\frac{7}{8}$	23 1		15 47 $\frac{1}{2}$	—	—	4	
	20 38 22		20 6 57		22 11 $\frac{2}{3}$	23 10 $\frac{7}{8}$		15 10 $\frac{5}{8}$	78	80	3	
♂ — 13.	Noon.				89 22 $\frac{1}{4}$			14 53	80 $\frac{1}{4}$	82		
♀ — 14.	Noon.				89 2 $\frac{1}{4}$			14 54 $\frac{3}{4}$	81	81		
♂ — 15.	20 52 5,4		20 15 35		25 13 $\frac{4}{5}$			12 35	80	80	3	
○ — 16.					88 37 $\frac{1}{2}$			12 19 $\frac{1}{8}$	81	81		
	20 22 21		19 43 36		18 16 $\frac{9}{10}$			11 56 $\frac{3}{4}$			4	
♂ — 17.	22 51 37		22 11 17		55 36 $\frac{4}{5}$				81	82	3	
	0 28 46		23 48 26		79 15 $\frac{2}{3}$						3	
♂ — 18.					88 19 $\frac{1}{2}$			11 22 $\frac{2}{3}$	81	82		
	20 10 45 $\frac{1}{2}$		19 29 12 $\frac{1}{4}$		16 56 $\frac{6}{7}$			10 50	80 $\frac{1}{2}$	80	7	
♀ — 19.	1 50 20 $\frac{1}{2}$		—		79 38						3	
	3 59 45 $\frac{1}{2}$		—		48 2 $\frac{2}{3}$						5	
♀ — 21.	Noon.				86 33 $\frac{1}{2}$			8 37	79	79		
	22 30 0		21 44 32		53 13 $\frac{5}{7}$			7 55			3	
♂ — 22.	Noon.				86 7			7 50	80 $\frac{1}{2}$	80		
	4 53 32		4 7 42		31 12 $\frac{7}{10}$			7 41 $\frac{1}{3}$			5	
	20 6 50,6		19 20 12,6		19 18 $\frac{1}{5}$			6 57 $\frac{1}{3}$	79	80	5	
○ — 23.	Noon.				85 25 $\frac{1}{2}$			6 48 $\frac{1}{3}$	80	80		
	20 50 45		20 3 47		31 21 $\frac{1}{2}$			6 29	78 $\frac{1}{2}$	78	4	
♂ — 24.	Noon.				85 21 $\frac{1}{2}$			6 23 $\frac{1}{2}$	80	79		
♂ — 25.	Noon.				85 13::			5 54	80	80 $\frac{1}{2}$		
♀ — 26.	Noon.				84 46			5 6 $\frac{1}{2}$	79	76 $\frac{1}{2}$		
	20 22 13 $\frac{1}{2}$		19 30 26 $\frac{1}{2}$		27 42 $\frac{9}{10}$			4 18 $\frac{1}{2}$	78	78	4	
♂ — 27.	Noon.				84 14::		East.	4 13	79	80 $\frac{1}{2}$		
	4 52 22 $\frac{1}{4}$		4 0 8 $\frac{1}{4}$		24 26 $\frac{1}{10}$			4 8 $\frac{1}{2}$			4	
	20 8 41 $\frac{1}{2}$		19 10 39		24 36 $\frac{3}{10}$			3 43 $\frac{1}{4}$			4	
♀ — 28.	Noon.				84 4			3 42 $\frac{1}{8}$	78	77		
	5 4 7 $\frac{1}{2}$		4 10 35		19 58 $\frac{1}{2}$			3 41			4	
	19 29 37		18 35 16		17 29 $\frac{2}{3}$			3 16 $\frac{1}{2}$			3	

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1772.	Time by Watch K.		Time by Watch A. No. 3.		Altitude of the ☉'s L. L.	Longitude W. by K.	Longitude E. by A.	Latitude North.	Thermom.		No. of Observ.	Remarks.
	H	M	H	M					A.	B.		
h Aug. 29.	Noon.				83 52			3 9 $\frac{1}{2}$	77 $\frac{1}{2}$	78		
	5	3 41	4	8 49	18 33 $\frac{1}{2}$			3 0 $\frac{1}{2}$			4	
o — 30.	19	17 36	18	21 51	16 10 $\frac{3}{4}$			2 38 $\frac{1}{2}$			5	
	Noon.				83 40 $\frac{1}{2}$			2 35 $\frac{5}{8}$	77 $\frac{1}{2}$	77		
	5	8 34 $\frac{1}{2}$	4	12 49 $\frac{1}{2}$	15 22			2 35 $\frac{3}{4}$			2	
	19	54 40	18	57 33	27 17 $\frac{3}{4}$			2 33			3	
D — 31.	Noon.				83 59 $\frac{1}{2}$			2 33 $\frac{1}{2}$	79	78 $\frac{1}{2}$		
	19	18 16 $\frac{1}{2}$	18	19 43 $\frac{1}{2}$	18 22 $\frac{3}{4}$			2 4	78	77	7	
h Sept. 1.	Noon.				83 46 $\frac{1}{2}$			1 58 $\frac{1}{2}$	78	79		
	3	40 27 $\frac{1}{2}$	2	41 26 $\frac{1}{2}$	35 44			1 54 $\frac{1}{2}$			2	
	19	40 34 $\frac{1}{2}$	18	40 42 $\frac{1}{2}$	23 19 $\frac{3}{4}$			1 27 $\frac{1}{2}$			4	
h — 2.	Noon.				83 31 $\frac{1}{2}$			1 21 $\frac{1}{2}$	78	78		
u — 3.	19	20 50 $\frac{1}{2}$	18	18 36	15 47 $\frac{3}{4}$			0 57 $\frac{1}{2}$			5	
h — 4.	Noon.				83 45			0 50 $\frac{1}{2}$	76	75		
	2	36 11	1	33 34	54 42 $\frac{1}{2}$			0 49			6	
	3	16 46	2	14 9	44 48			0 49			6	
h — 5.	Noon.				84 10			0 53 $\frac{1}{2}$	75 $\frac{1}{2}$	76		
	3	9 36	2	5 50 $\frac{1}{2}$	46 33			0 54 $\frac{1}{2}$			7	
	4	7 16	3	3 40	31 58			0 54 $\frac{1}{2}$			4	
o — 6.	Noon.				84 12 $\frac{1}{2}$			0 33 $\frac{1}{2}$	76	75		
	4	9 58 $\frac{1}{2}$	3	4 56 $\frac{1}{2}$	30 32 $\frac{1}{2}$			0 31			8	
							South.					
D — 7.	19	22 26	18	15 1	16 42 $\frac{3}{4}$			0 10 $\frac{1}{2}$			3	
h — 8.	Noon.				84 6			0 18	76 $\frac{1}{2}$	76		
	19	42 53	18	33 48 $\frac{1}{2}$	20 59 $\frac{1}{2}$			0 51 $\frac{1}{2}$			4	
h — 9.	Noon.				83 48			0 59	76	75		
	19	55 48			23 2			1 53	75	74 $\frac{1}{2}$	4	
u — 10.	Noon.				83 10			2 0	76	75		
	19	27 17 $\frac{1}{2}$	18	14 49	14 28 $\frac{1}{2}$			2 55 $\frac{1}{2}$			5	
h — 11.	Noon.				82 27 $\frac{1}{2}$			3 5 $\frac{1}{2}$	76	76		
h — 12.	Noon.				81 44			4 11 $\frac{1}{2}$	77	76 $\frac{1}{2}$		
	4	7 1	2	54 37	34 52 $\frac{9}{10}$			4 18 $\frac{3}{4}$			4	
	19	58 19	18	42 41	20 21			4 58 $\frac{3}{4}$			4	
o — 13.	0 45 38				80 48						3	
	3	10 35			50 16 $\frac{1}{2}$			5 12			3	
	20	22 24	19	6 30 $\frac{1}{2}$	25 12 $\frac{3}{4}$			6 23 $\frac{3}{4}$	75	75	4	
D — 14.	Noon.				80 10			6 32 $\frac{1}{2}$	76	76 $\frac{1}{2}$		
	5	27 44	4	9 51 $\frac{1}{2}$	17 13 $\frac{7}{8}$			6 52 $\frac{3}{4}$			4	
h — 15.	Noon.				78 49			8 16 $\frac{1}{2}$	75 $\frac{1}{2}$	77		
	21	4 34	19	43 41	33 40 $\frac{1}{2}$			9 17 $\frac{1}{2}$			3	
h — 16.	20	32 34	19	10 9	25 9 $\frac{1}{2}$	West.	10 55				3	
	21	55 19			43 50 $\frac{1}{2}$						3	
	23	54 23			71 10 $\frac{5}{8}$						3	
u — 17.	Noon.				76 48			11 4	75	73 $\frac{1}{2}$		
	20	7 29	18	43 40	18 23			12 12 $\frac{5}{8}$			4	
	21	24 13 $\frac{1}{2}$	20	0 20	36 50 $\frac{4}{5}$			12 16 $\frac{1}{8}$			4	

1772.	Time by Watch K.		Time by Watch A. No. 3.		Altitude of the ☉'s L. L.	Longitude West by K.	Longitude West by A.	Latitude South.	Thermom.		No. of Obs.	Remarks.
	H	M	H	M					A.	B.		
♀ Sept. 18.	Noon.				75 44 $\frac{1}{2}$			12 31 $\frac{1}{2}$	75	73 $\frac{1}{2}$		
	21 58 48		20 39 24		43 58 $\frac{3}{4}$			13 56			3	
	23 33 46 $\frac{1}{2}$				64 39 $\frac{1}{2}$						4	
	0 36 33				73 59 $\frac{1}{2}$						3	
♂ — 19.	Noon.				74 32			14 07	74	72 $\frac{1}{2}$		
	5 9 37		3 43 42 $\frac{1}{2}$		24 47 $\frac{3}{8}$			14 15 $\frac{1}{2}$			4	
	20 18 32		18 57 37		19 31 $\frac{1}{2}$			15 24	72 $\frac{1}{2}$	72	6	
	22 1 39 $\frac{1}{2}$		20 34 34 $\frac{1}{2}$		43 47			15 29			6	
☉ — 20.	Noon.				73 24			15 38	73	72 $\frac{1}{2}$		
☽ — 21.	Noon.				72 12			17 14	73	71		
	21 31 20 $\frac{1}{2}$		20 2 6 $\frac{1}{2}$		35 18 $\frac{7}{8}$			18 30			10	
♂ — 22.	Noon.				71 2 $\frac{1}{2}$			18 46 $\frac{1}{2}$	74	75		
♀ — 23.	Noon.				70 0 $\frac{1}{2}$			20 12 $\frac{1}{2}$	73	73		
	6 7 10		4 36 2		12 59 $\frac{5}{8}$			20 28			6	
	21 36 40		20 4 37		36 19 $\frac{1}{2}$			21 24			6	
♂ — 24.	Noon.				69 1			21 35 $\frac{1}{2}$	72 $\frac{1}{2}$	72		
♀ — 25.	Noon.				68 5			22 54 $\frac{1}{2}$	71 $\frac{1}{2}$	70 $\frac{1}{2}$		
	20 20 55		18 46 0 $\frac{1}{2}$		16 55 $\frac{3}{4}$			24 3	69	69	4	
♂ — 26.	Noon.				67 6			24 17	72	73		
	5 25 38		3 50 13 $\frac{1}{2}$		23 40 $\frac{1}{2}$			24 21			4	
	20 12 50 $\frac{1}{2}$		18 36 49 $\frac{1}{2}$		15 23			24 40 $\frac{1}{2}$	69	69 $\frac{1}{2}$	5	
☉ — 27.	Noon.				67 2			24 44 $\frac{1}{2}$	71 $\frac{1}{2}$	74		
	6 17 57 $\frac{1}{2}$		4 41 16 $\frac{1}{2}$		12 0 $\frac{1}{2}$			24 50			7	
	20 46 55		19 9 28		23 18 $\frac{1}{2}$			29 19 $\frac{1}{2}$				
☽ — 28.	Noon.				66 40 $\frac{1}{2}$			25 29 $\frac{1}{2}$	71 $\frac{1}{2}$	72		
	20 10 46		18 32 6		16 5 $\frac{1}{2}$			26 8	69 $\frac{1}{2}$	67	4	
♂ — 29.	21 35 6		19 54 54 $\frac{1}{2}$		36 38 $\frac{1}{2}$			26 53 $\frac{1}{2}$			4	
♀ — 30.	Noon.				68 58			26 58 $\frac{2}{3}$	71 $\frac{1}{2}$	71 $\frac{1}{2}$		
	5 27 48		3 47 7		19 42 $\frac{1}{10}$			27 4 $\frac{1}{2}$			5	
	20 19 14		18 37 49 $\frac{1}{2}$		22 16 $\frac{2}{3}$			27 23 $\frac{1}{2}$			5	
♂ Oct. 1.	Noon.				65 52			27 27 $\frac{7}{8}$	71 $\frac{1}{2}$	71		
	3 59 37 $\frac{1}{2}$		2 17 38		37 17 $\frac{2}{3}$			27 29			5	
	4 4 28		2 23 28 $\frac{1}{2}$		35 59 $\frac{7}{8}$			27 29			6	
	4 38 47 $\frac{1}{2}$		2 56 09		29 1			27 28 $\frac{1}{2}$			5	
	21 34 52 $\frac{1}{2}$		19 52 2		39 35 $\frac{1}{2}$			27 35 $\frac{1}{2}$			4	
♀ — 2.	Noon.				66 4 $\frac{1}{2}$			27 38 $\frac{1}{2}$				
					66 2 $\frac{1}{2}$			27 40 $\frac{1}{2}$	68 $\frac{1}{2}$	65 $\frac{1}{2}$		
	3 12 36 $\frac{1}{2}$		1 29 19 $\frac{1}{2}$		46 3 $\frac{2}{3}$			27 44 $\frac{1}{2}$			6	
♂ — 3.	Noon.				65 57			28 9 $\frac{1}{2}$	66 $\frac{1}{2}$	67 $\frac{1}{2}$		
	3 26 30		1 41 56		41 59			28 14 $\frac{2}{3}$			4	
	21 19 35 $\frac{1}{2}$		19 34 5		39 47 $\frac{7}{8}$			28 54			4	
☉ — 4.	Noon.				65 27 $\frac{1}{2}$			29 2 $\frac{1}{2}$	64 $\frac{1}{2}$	62		
	20 39 57		18 53 13		33 11 $\frac{1}{2}$			29 9			4	
☽ — 5.	Noon.				65 51 $\frac{1}{2}$			29 0 $\frac{5}{6}$	62 $\frac{1}{2}$	61		
	4 4 33		2 17 26 $\frac{1}{2}$		30 5 $\frac{1}{2}$	11 13 $\frac{1}{2}$		28 54 $\frac{1}{2}$			14	Hazy.

Sextant made
by Ramsden.
Ditto by Dollond.

ON BOARD THE RESOLUTION.

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1772.		Time by Watch K.		Time by Watch A. No. 3.		Altitude of the ☉'s L. L.	Longitude West by K.	Longitude West by A.	Latitude S.	Thermom.		Barom.	Remarks.
		H	M	H	M					A.	B.		
D	Oct. 5.	22	7	10	20	19	9		29 40			4	
δ	— 6.	Noon.				65 27			29 48½	64	61½		
		20	13	5	18	23	56½		31 2½			4	
g	— 7.	Noon.				64 17½			31 21	63½	60½		
u	— 8.	4	29	14	2	39	41		31 28½			4	
		Noon.				63 16			32 45½	63½	62		
		4	12	25½	2	21	30½		32 56½			6	Very hazy.
		20	23	45	18	31	47½		33 49			5	
q	— 9.	Noon.				62 24			34 0½	63½	61		
		20	4	32½	18	11	11½		34 20½			4	
h	— 10.	Noon.				62 16½			34 28½	63½	62		
		5	6	46½	3	12	57½		34 31½			7	
		19	35	3½	17	40	30½		34 42½			4	
o	— 11.	Noon.				62 25			34 44½	63	63½		
		4	13	29	2	18	34½		34 46½			4	
		6	24	12	The Moon rose about two-thirds eclipsed.								
		6	53	24	End by Mr. Gilbert: naked eye.								
		6	53	51	Ditto, by Captain Cook: common ship's spying-glass.								
		6	54	57	Ditto, by W. Wales: a six inch achromatic telescope of Dollond's make, magnifying four times. Apparent time 6 h. 58' 56".								
		6	55	23	Ditto, by Dr. Forster: a two feet achromatic telescope of Ramsden's making.								
		6	55	30	Ditto, by Lieutenant Pickersgill: common three feet refracter.								
		7	4	0	I could see nothing of the penumbra with the glass that I used.								
		20	1	12	18	4	0½		34 51½			4	
D	— 12.	Noon.				62 40			34 51½	63	63		
		4	56	3½	2	59	54		34 52			7	
δ	— 13.	Noon.				62 40			35 14½	64	65½		
		19	33	18	17	35	11		35 30	60½	61	4	
g	— 14.	Noon.				62 44½			35 32½	63½	61		
		19	23	3½	17	23	41		35 37			5	
u	— 15.	Noon.				63 1		Eaft.	35 37½	62	62		
		19	6	19	17	5	44		35 19½	60½	59	5	
q	— 16.	Noon.				63 43½			35 17	63	61		
		18	44	43	16	42	55		35 1	59	57	5	
h	— 17.	Noon.				64 23½			35 0	61½	59		
		4	6	38½	2	3	26		34 39½			5	
o	— 18.	Noon.				65 6½			34 37½	59½	60½		
		3	2	47½	0	59	30		34 35½			4	
		19	24	2	17	19	57		34 29½			5	Very cloudy.
D	— 19.	Noon.				65 46½			34 19	60½	57		
		4	2	14	1	57	42½		34 23½			5	
		18	32	21	16	27	6		34 41½			5	
		18	52	13½	16	46	57½		34 41½			4	
δ	— 20.	Noon.				65 38½			34 48½	63½	62½		
		18	13	21	16	6	57		35 20½	63	60½	6	

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1772.	Time by Watch K.		Time by Watch A. No. 3.		Altitude of the ☉'s L. L.	Longitude East by K.	Longitude East by A.	Latitude S	Thermom.		Z	Remarks.
	H	"	H	"					A.	B.		
☉ Nov. 22.	3	10 29	3	6 3	24 14½	{ About 3 or 4 miles N. N. E. }				4		
						{ true off the Observatory. }						
☾ — 23.	17	12 59	17	7 54	22 9½	17 51½	17 29	34 11½	65	62	5	
		Noon.			75 44½			34 36½	66	65		
	3	7 9	3	1 35	25 48⅜	17 43⅜	17 23½	34 51½			4	
☽ — 24.	17	39 19½	17	33 3	27 57⅛	18 10¼	17 47¾	35 16½	67	62	4	
		Noon.			75 9½			35 20½	65½	63½		
	3	7 2	3	0 28	26 2¾	17 43⅜	17 19½	35 32⅝			4	
☾ — 25.	17	49 36	17	42 7	29 6⅛	16 47⅛	16 5¼	36 49½	64	62	4	
		Noon.			73 30½			37 14	66	64		
	3	27 2	3	19 4	23 31⅜	16 29⅝	16 0¼	37 39½			4	Very hazy.
☾ — 26.	17	55 28	17	46 41½	29 34¼	15 39½	15 10	38 46¼	67½	66½	4	
		Noon.			71 52½			39 3½	69	69½		
	2	50 18	2	40 9½	31 48⅝	15 30	14 55¾	39 20			4	
☽ — 27.	17	41 16	17	31 22	27 43	16 17½	15 37½	39 55½	60	53	5	
		Noon.			71 1½			40 5⅝	60	53		
☾ — 28.	2	31 44½	2	21 26	34 39⅜	16 39½	16 0¼	40 17¾			4	
		Noon.			70 18½			40 58½	62	59¾	4	
☉ — 29.	17	38 21	17	26 8	27 16⅜	16 28⅝	15 40	41 56	57	52½	5	Very dubious. Great sea.
☾ — 30.		Noon.			69 19::			42 8	60½	51		
		Noon.			69 15::			42 22	58½	55		Ditto. Very doubtful.
☽ Dec 1.	4	28 6½			13 4¾	18 2½		42 28			1	
☾ — 2.	18	24 25½	18	8 22	37 11¼	18 22	17 21¾	43 34	56	46	5	
☾ — 3.	20	35 49	20	18 24½	59 1⅜	18 27	17 22	44 24½			6	
		Noon.			67 37½			44 25½	55	49		
	4	12 45½	3	54 27	16 39	18 25	17 26¼	44 43			5	
☽ — 4.	17	53 48	17	35 17	31 52½	18 32	17 24	45 23⅝	52½	43½		
		Noon.			66 26			45 45	53	44½		
	2	25 56	2	5 36	35 30⅜	18 34⅞	17 25½	46 0			6	A great sea.
☾ — 5.	18	6 34½	17	52 50½	33 48⅝	18 14¼	17 0⅞	46 48⅜	46	50½	5	
		Noon.			65 9			47 9½	48	52		
☉ — 6.		Noon.			63 51::			48 34½	50	38		Foggy.
	3	0 25	2	39 12	29 41⅝	18 27½	17 5	48 45			5	
☾ — 7.		Noon.			62 43			49 49	47	42½		Very uncertain.
☽ — 9.		Noon.			62 59:			49 45	44	36		
	17	43 0	17	16 42	31 42½	21 8⅝	19 37⅛	50 51⅜	41½	34	4	
☾ — 10.		Noon.			61 44½			51 4¾	44½	36½		
	17	56 8½	17	28 30½	33 49	21 24½	19 42½	51 37⅝	42	32½	4	
☽ — 11.		Noon.			61 4½			51 49⅜	50½	34		
	1	56 52¼	1	28 44½	38 9½	21 47⅞	20 14	52 0½			4	
☉ — 13.	20	13 12⅔	19	41 21	51 29⅒	22 9½	20 29	54 53			6	
☾ — 14.		Noon.			58 10½			54 55½	49½	33		
	1	59 5	1	26 57½	37 7½	21 59⅜	20 9½	54 57			5	
☽ — 16.	17	58 18	17	22 28½	34 50⅜	23 34½	21 48½	55 8⅜			5	
☾ — 17.		Noon.			57 57½			55 16	53¾	33½		
	5	48 45½	5	12 14½	5 7⅒	24 43⅜	22 55	55 8⅜			10	
☾ — 19.	4	44 47	4	5 33½	12 8½	26 4½	24 12⅜	54 15		31½	10	

1772.	Time by Watch K.			Time by Watch A. No. 3.	Altitude of the ☉'s L. L.	Longitude East by K.	Longitude East by A.	Latitude S.	Thermom.		No. of Obs.	Remarks.
	H	M	S	H					A.	B.		
☉ Dec. 20.	18	14	2	17 32 35 $\frac{3}{4}$	40 17 $\frac{1}{2}$	29 24	27 28 $\frac{3}{4}$	53 51 $\frac{1}{2}$	42	32 $\frac{1}{2}$	4	
	19	23	1	18 41 31 $\frac{1}{2}$	49 24 $\frac{3}{4}$	29 25	27 28 $\frac{1}{2}$	53 55 $\frac{5}{8}$		33	4	
☾ — 21.	Noon.				59 6 $\frac{1}{2}$			54 10 $\frac{1}{2}$	50	33 $\frac{1}{2}$		
	2	15	10		31 23 $\frac{3}{4}$	29 50		54 30 $\frac{1}{2}$		34 $\frac{1}{2}$	4	
	18	18	48	17 35 58 $\frac{1}{2}$	41 4	30 20 $\frac{1}{2}$	28 22 $\frac{3}{4}$	55 5 $\frac{5}{8}$	46	32 $\frac{1}{2}$	5	Bad horizon.
☿ — 22.	Noon.				58 22 $\frac{1}{2}$			54 54	52	33		
♄ — 23.	Noon.				57 50			55 25 $\frac{1}{2}$	59 $\frac{1}{4}$	34		
	17	42	2	16 56 28	36 18 $\frac{3}{4}$	31 42 $\frac{1}{2}$	29 40	56 23	49	32 $\frac{1}{2}$	5	
♃ — 24.	Noon.				56 42 $\frac{1}{2}$			56 31 $\frac{3}{4}$	57	35		
♂ — 26.	Noon.				54 39			58 31 $\frac{1}{2}$	52	31 $\frac{1}{2}$		
	4	12	15	3 23 16	17 58	26 13 $\frac{3}{8}$	24 20 $\frac{1}{2}$	58 32 $\frac{3}{4}$		32	5	
	5	27	37 $\frac{1}{2}$	4 38 18	9 4 $\frac{1}{2}$	26 13 $\frac{7}{8}$	24 8	58 32 $\frac{3}{4}$			3	
	19	4	0	18 14 10	42 11	24 43 $\frac{3}{4}$	22 35 $\frac{3}{4}$	58 22 $\frac{3}{4}$	47 $\frac{1}{2}$	33 $\frac{1}{2}$	5	
☉ — 27.	Noon.				54 47 $\frac{1}{2}$			58 20	54	36		
	2	37	25	1 47 8	30 49 $\frac{1}{2}$	25 19 $\frac{1}{2}$	23 11 $\frac{1}{2}$	58 20			5	
☾ — 28.	Noon.				54 20			58 44 $\frac{1}{2}$	50	35		
	2	45	49 $\frac{1}{2}$	1 54 4	31 42	21 25 $\frac{7}{8}$	19 16 $\frac{3}{8}$	58 53 $\frac{1}{8}$			5	
☿ — 29.	Noon.				53 48 $\frac{3}{4}$			59 12	48	33 $\frac{1}{2}$		
♄ — 30.	Noon.				53 33 $\frac{1}{2}$			59 23 $\frac{1}{4}$	56 $\frac{1}{2}$	36 $\frac{1}{2}$		
	2	24	07	1 29 51	36 37 $\frac{3}{4}$	20 30 $\frac{1}{2}$	13 15 $\frac{3}{8}$	59 27			5	
1773.												
♂ Jan. 2.	4	6	48	3 7 35 $\frac{1}{2}$	27 0 $\frac{1}{2}$	10 19 $\frac{1}{2}$	8 5 $\frac{3}{4}$	58 52			9	
	4	29	13 $\frac{1}{2}$	3 30 3	24 3 $\frac{1}{2}$	10 26	8 12 $\frac{1}{2}$	58 52			5	
☾ — 4.	Noon.				53 27 $\frac{1}{2}$			59 1 $\frac{5}{8}$	52	33		
☿ — 6.	17	34	52	16 28 47	30 42 $\frac{5}{8}$	27 36 $\frac{3}{4}$	25 14 $\frac{1}{2}$	60 33 $\frac{5}{8}$	44	34	4	Hazy.
	17	41	47	16 35 42	31 33 $\frac{1}{2}$	27 36 $\frac{5}{8}$	25 14	60 33 $\frac{5}{8}$	44	34	5	Ditto.
	19	40	49	18 34 38	44 39 $\frac{1}{8}$	27 57 $\frac{7}{8}$	25 35	60 36 $\frac{3}{4}$			5	Good.
♃ — 7.	Noon.				51 26 $\frac{3}{4}$			60 40 $\frac{5}{8}$	54	35		
	19	9	38	18 1 56 $\frac{1}{2}$	42 38 $\frac{1}{8}$	31 58 $\frac{1}{2}$	29 42 $\frac{3}{4}$	61 18	45	34	5	
	19	9	38		42 38 $\frac{1}{8}$	☉ N. 57° E. Ship's course S. E. at 5 miles an hour.		61 22	53	34 $\frac{3}{4}$	5	
☾ — 8.	22	2	24		50 26 $\frac{7}{8}$						4	
	16	55	0	15 45 53	28 45 $\frac{3}{4}$	34 30 $\frac{1}{2}$	32 15 $\frac{1}{2}$	61 36	49 $\frac{1}{2}$	33 $\frac{1}{2}$	5	
♂ — 9.	Noon.				50 15			61 36	56 $\frac{1}{2}$	35		
	19	18	16 $\frac{1}{2}$	19 22 34 $\frac{1}{2}$	44 2 $\frac{7}{8}$	35 56	33 42	61 54			5	
	19	18	16 $\frac{1}{2}$		44 2 $\frac{7}{8}$	☉ N. E. by E. Ship's course S. at the rate of 3 miles an hour.		62 0	55	34	5	
☉ — 10.	23	57	10 $\frac{1}{2}$		42 10						5	
	16	52	5	16 39 46	29 2 $\frac{3}{4}$	36 58 $\frac{3}{4}$	34 45 $\frac{7}{8}$	63 2 $\frac{5}{8}$	46 $\frac{1}{2}$	34	4	
☾ — 11.	16	38	17 $\frac{1}{2}$	15 24 22 $\frac{1}{2}$	27 37 $\frac{1}{4}$	38 5 $\frac{1}{8}$	35 53 $\frac{3}{4}$	64 11 $\frac{2}{3}$	50	35	5	
	19	16	27 $\frac{1}{2}$	18 2 23 $\frac{1}{2}$	42 26 $\frac{3}{8}$	37 53 $\frac{3}{8}$	35 41 $\frac{1}{2}$	64 11 $\frac{2}{3}$			5	
☿ — 12.	Noon.				47 11 $\frac{1}{4}$			64 11 $\frac{2}{3}$	56	35		
	18	14	22	16 58 45	37 20 $\frac{2}{3}$	38 35	36 24 $\frac{1}{2}$	64 16 $\frac{2}{3}$	49	34 $\frac{1}{2}$	5	
☾ — 13.	Noon.				46 56			64 16 $\frac{3}{4}$	00 $\frac{1}{4}$	38		Bad horizon.

ON BOARD THE RESOLUTION.

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1773.	Time by Watch K.		Time by Watch A. No. 3.		Altitude of the ☉'s L. L.	Longitude East by K.	Longitude East by A.	Latitude S.	Thermom.		No. of Obs.	Remarks.
	H	"	H	"					A.	B.		
Jan. 13.	17	0 24 $\frac{1}{2}$	15	43 6 $\frac{1}{2}$	29 55 $\frac{2}{3}$	38 47 $\frac{1}{2}$	36 40 $\frac{1}{2}$	64 1			6	
14.	17	9 5	15	51 47	30 49 $\frac{2}{3}$	38 44	36 36 $\frac{1}{2}$	64 1			6	
	Noon.				47 5			63 57	57	35 $\frac{1}{2}$		
	1	39 20 $\frac{1}{2}$	0	21 26	29 27 $\frac{1}{2}$	39 7 $\frac{1}{2}$	37 01 $\frac{1}{2}$	63 54 $\frac{1}{2}$			5	
	17	1 25	15	42 25 $\frac{1}{2}$	30 4 $\frac{3}{4}$	39 7 $\frac{1}{2}$	37 2 $\frac{1}{2}$	63 35 $\frac{1}{2}$	52	35	5	
	18	8 45	16	49 58 $\frac{1}{2}$	36 55 $\frac{1}{2}$	38 55 $\frac{1}{2}$	36 51 $\frac{1}{2}$	63 32			6	
	18	30 50	17	11 23 $\frac{1}{2}$	38 59 $\frac{2}{3}$	39 4 $\frac{1}{2}$	37 0 $\frac{1}{2}$	63 32			6	
15.	Noon.				47 18			63 32 $\frac{3}{4}$	58 $\frac{1}{2}$	42		
	3	28 41 $\frac{1}{2}$	2	8 56 $\frac{1}{2}$	17 26	38 51 $\frac{7}{8}$	36 49 $\frac{1}{2}$	63 31 $\frac{1}{2}$			5	
16.	19	6 49 $\frac{1}{2}$	17	45 57	41 3 $\frac{7}{8}$	38 43 $\frac{7}{8}$	36 42 $\frac{1}{2}$	64 23			5	
	Noon.				46 8 $\frac{1}{2}$			64 31	56	35		
	3	22 45	2	1 16 $\frac{1}{2}$	18 11	38 55 $\frac{1}{2}$	36 55 $\frac{1}{2}$	64 55 $\frac{3}{4}$	60	34 $\frac{1}{2}$	6	
	18	32 39	17	10 7 $\frac{1}{2}$	36 57 $\frac{2}{3}$	38 52	36 53 $\frac{1}{2}$	66 21 $\frac{2}{3}$		33 $\frac{1}{2}$	5	
17.	Noon.				43 51			66 36 $\frac{2}{3}$	51 $\frac{1}{2}$	34		Very foggy.
	18	9 23	16	45 18	34 53 $\frac{2}{3}$	38 49 $\frac{3}{8}$	36 51 $\frac{1}{2}$	66 14	46	32	5	Ditto.
18.	Noon.				44 16			65 59 $\frac{1}{2}$	52	34 $\frac{1}{2}$		Exceeding foggy.
	2	43 24 $\frac{1}{2}$	1	18 46	22 7 $\frac{2}{3}$	38 43 $\frac{3}{8}$	36 45 $\frac{1}{2}$	65 36 $\frac{1}{2}$		33	5	
	17	18 19	15	52 44	36 44 $\frac{3}{8}$	39 18 $\frac{1}{2}$	37 21 $\frac{1}{2}$	64 41 $\frac{1}{2}$	45	35	3	
19.	Noon.				45 33 $\frac{1}{2}$			64 29	51 $\frac{1}{2}$	35		
	2	41 36 $\frac{1}{2}$	1	15 24	21 47 $\frac{1}{2}$	39 33 $\frac{7}{8}$	37 36 $\frac{1}{2}$	64 17 $\frac{1}{2}$		34 $\frac{1}{2}$	4	
	16	56 9	15	29 1	28 29	39 36 $\frac{5}{8}$	37 39 $\frac{3}{8}$	64 16	48	33 $\frac{1}{2}$	5	
20.	1	32 13 $\frac{1}{2}$	0	4 31 $\frac{1}{2}$	29 3 $\frac{3}{4}$	39 53 $\frac{1}{2}$	37 53 $\frac{1}{2}$	63 47		33 $\frac{1}{2}$	5	
	16	55 17	15	26 33 $\frac{1}{2}$	28 49	40 28	38 31 $\frac{1}{2}$	63 1 $\frac{1}{2}$	43	35	3	Very cloudy.
21	Noon.				46 50::			62 46 $\frac{1}{2}$	53 $\frac{1}{2}$	35 $\frac{1}{2}$		
	21	53 6 $\frac{1}{2}$			46 17 $\frac{2}{3}$	Ship's Course E. N. E. 4 knots. ☉ N. 20° E. at 2d Observation.		62 47 $\frac{1}{2}$			5	
	23	46 10			38 58						5	
	2	44 54	1	16 30	20 15 $\frac{2}{3}$							
22	17	10 26 $\frac{1}{2}$	15	40 8 $\frac{1}{2}$	31 33 $\frac{1}{3}$	41 15 $\frac{1}{2}$	39 20 $\frac{1}{2}$	62 28 $\frac{1}{3}$	56 $\frac{1}{2}$	35 $\frac{1}{2}$	7	
	Noon.				47 48 $\frac{1}{2}$	42 21 $\frac{1}{2}$	40 40 $\frac{1}{2}$	61 48	44	35 $\frac{1}{2}$	5	
					47 50			61 33 $\frac{5}{8}$	54	37 $\frac{1}{2}$		
23	16	59 49	15	27 56 $\frac{1}{2}$	31 44 $\frac{2}{3}$	45 13	43 18	60 21 $\frac{1}{3}$	47	35	6	
	Noon.				49 5 $\frac{1}{2}$			60 2 $\frac{1}{2}$	51 $\frac{1}{2}$	36 $\frac{1}{2}$		
	1	19 13	23	46 50	27 50	46 33 $\frac{1}{2}$	44 38 $\frac{1}{2}$	59 41 $\frac{1}{2}$		35 $\frac{1}{2}$	5	
24	Noon.				50 29 $\frac{1}{2}$			58 24 $\frac{1}{2}$	51 $\frac{1}{2}$	34 $\frac{1}{2}$		
	0	51 44 $\frac{1}{2}$	23	17 53	30 5 $\frac{2}{3}$	49 14 $\frac{1}{2}$	47 19 $\frac{1}{2}$	57 59 $\frac{1}{3}$	55	34 $\frac{1}{2}$	4	
26.	16	9 21 $\frac{1}{2}$	14	30 16	28 1 $\frac{7}{8}$	50 41	48 48 $\frac{1}{2}$	56 46	41	35 $\frac{1}{2}$	5	
	17	44 42 $\frac{1}{2}$			40 11 $\frac{3}{4}$	Ship's Course N. E. by E. 4 knots.		56 31			4	
	20	18 47			51 3 $\frac{1}{2}$						4	
	Noon.				51 40 $\frac{1}{2}$							
27.	23	48 11 $\frac{1}{2}$	22	9 33	37 15 $\frac{2}{3}$	51 10	49 18 $\frac{1}{2}$	56 28	51 $\frac{1}{2}$	35		
	23	57 47 $\frac{1}{2}$	22	19 9	35 59 $\frac{1}{3}$	51 18 $\frac{1}{2}$	49 26 $\frac{3}{8}$	56 15	52	36	5	
	0	23 52 $\frac{1}{2}$	22	44 14	32 48 $\frac{3}{4}$	51 8 $\frac{1}{2}$	49 16 $\frac{1}{2}$	56 14 $\frac{1}{2}$	52	36	3	
	2	24 36	0	45 50 $\frac{1}{2}$	16 4 $\frac{1}{2}$	51 9 $\frac{1}{2}$	49 18 $\frac{1}{2}$	56 6 $\frac{3}{8}$	52	36	5	
	16	5 55 $\frac{1}{2}$	14	26 13 $\frac{1}{2}$	28 8 $\frac{1}{2}$	51 41 $\frac{1}{2}$	50 5	55 1	47	38	5	

1773.	Time by Watch K.		Time by Watch A. No. 3.		Altitude of the ☉'s L. L.	Longitude East by K.		Longitude East by A.		Latitude S.	Thermom.		No. of Obs.	Remarks.
	H	"	H	"		°	'	°	'		A.	B.		
4 Jan. 28.	Noon.				53 24 $\frac{1}{4}$					54 28 $\frac{2}{3}$	51	36 $\frac{1}{2}$	5	Ramfden's Qua. Dollond's Quad.
♀ — 29.	Noon.				53 24					54 28 $\frac{2}{3}$				
h — 30.	16	9 16	14	24 35	55 7 $\frac{1}{2}$					52 29	53 $\frac{1}{2}$	38	5	
○ — 31.	20 33 31 $\frac{3}{4}$				31 46 $\frac{4}{5}$	57 3 $\frac{1}{8}$	55 17 $\frac{1}{2}$			51 13	48	38		
	22 53 6 $\frac{1}{2}$					☉ N. 37° W. at the 2d Observat. Ship's Course N. N. E. 5 m. an h.				50 50 $\frac{1}{3}$				
4 Feb. 1.	15 46 30		14	0 11	28 33 $\frac{2}{3}$	57 29 $\frac{7}{8}$	55 46			49 17 $\frac{1}{3}$	47	40 $\frac{1}{2}$	5	
	Noon.				57 54 $\frac{3}{4}$					48 51 $\frac{1}{2}$	54	41 $\frac{1}{2}$		
♂ — 2.	17 18 15 $\frac{1}{2}$		15	30 11 $\frac{1}{2}$	44 4 $\frac{7}{8}$	59 38	57 56 $\frac{1}{4}$			48 33 $\frac{1}{3}$	48	43	4	
	Noon.				57 52 $\frac{1}{2}$					48 36 $\frac{1}{2}$	56 $\frac{1}{2}$	45 $\frac{1}{2}$		
	0 5 20 $\frac{1}{2}$		22	16 48 $\frac{1}{2}$	30 42 $\frac{1}{2}$	60 3 $\frac{1}{2}$	58 22 $\frac{1}{2}$			49 0 $\frac{5}{8}$		46 $\frac{1}{4}$	4	
♀ — 3.	15 44 39		13	54 59	30 20 $\frac{4}{5}$	61 19 $\frac{1}{4}$	59 39 $\frac{3}{4}$			48 45 $\frac{1}{8}$	51 $\frac{1}{2}$	43 $\frac{1}{2}$	5	
h — 4.	15 46 1 $\frac{1}{2}$		13	54 34 $\frac{1}{2}$	29 17 $\frac{3}{5}$	59 50	58 14 $\frac{1}{4}$			49 4	52	42 $\frac{1}{2}$	5	
	Noon.				56 38 $\frac{1}{2}$					49 15	56 $\frac{1}{2}$	45		
	0 1 47		22	9 44	31 19 $\frac{1}{3}$	59 11 $\frac{3}{4}$	57 38 $\frac{5}{8}$			49 30	58	44 $\frac{1}{2}$	5	
	1 48 20 $\frac{1}{2}$		23	56 9 $\frac{1}{2}$	14 9 $\frac{1}{2}$	59 19 $\frac{1}{4}$	57 45 $\frac{1}{4}$			49 37 $\frac{2}{3}$	60	43 $\frac{3}{4}$	9	
	16 3 7		14	9 54 $\frac{1}{2}$	31 15 $\frac{1}{2}$	59 0 $\frac{7}{8}$	57 29			49 15 $\frac{5}{8}$	53	40	5	
♀ — 5.	Noon.				56 28					49 7	59 $\frac{1}{4}$	41		
	0 37 46		22	44 2	25 39 $\frac{1}{8}$	58 50 $\frac{1}{4}$	57 18			48 40 $\frac{3}{5}$	57	41	4	
	17 54 17 $\frac{1}{2}$		15	59 28 $\frac{1}{2}$	47 42 $\frac{1}{3}$	58 44 $\frac{1}{8}$	57 11 $\frac{1}{4}$			48 6 $\frac{1}{2}$	51	43	5	
h — 6.	23 1 52				40 24 $\frac{7}{8}$	59 35				48 6 $\frac{1}{2}$		44 $\frac{1}{4}$	5	
	15 12 57		13	16 46	24 27	61 38 $\frac{7}{8}$	60 6			48 39 $\frac{1}{2}$	48	44	5	
○ — 7.	Noon.				56 6 $\frac{1}{4}$					48 51 $\frac{1}{4}$	54	44	5	Ramfden's Qua. Dollond's Quad.
					56 7					48 51 $\frac{1}{2}$				
	0 23 53		22	27 6	24 56 $\frac{1}{5}$	62 41 $\frac{3}{8}$	61 9			49 4 $\frac{1}{2}$	63	45	5	
♂ — 8.	18 42 25		16	42 39 $\frac{1}{2}$	52 23 $\frac{3}{8}$	64 27				50 0			5	
♀ — 9.	Noon.				54 18 :					50 1 $\frac{1}{4}$	57 $\frac{1}{2}$	45		
	15 36 37 $\frac{1}{2}$		13	35 23	29 19	64 44 $\frac{1}{4}$	63 18			49 51 $\frac{1}{8}$	48	40	5	
	17 1 4		14	59 43 $\frac{1}{2}$	41 47 $\frac{1}{5}$	65 59 $\frac{1}{2}$	64 33 $\frac{1}{2}$						5	
♀ — 10.	Noon.				53 54					50 6 $\frac{1}{2}$	52 $\frac{1}{2}$	41 $\frac{1}{2}$		
	23 44 31 $\frac{1}{2}$		23	42 45	28 11 $\frac{3}{5}$	68 22 $\frac{1}{4}$	64 33 $\frac{1}{2}$			50 23 $\frac{2}{3}$	53	41	5	
						Ship's Course S. by E. 7 $\frac{1}{2}$ miles an hour. ☉ N. 42° W. at 2d Obsf.				51 22			4	
4 — 11.	20 54 57 $\frac{1}{2}$				48 19 $\frac{1}{4}$								6	
	23 50 37 $\frac{1}{2}$				27 18 $\frac{1}{4}$									
	23 50 37 $\frac{1}{2}$		21	47 12 $\frac{1}{2}$	27 18 $\frac{1}{4}$	68 22 $\frac{1}{4}$	66 58			51 34 $\frac{3}{5}$			6	
	14 26 10		12	21 44	20 47 $\frac{2}{3}$	70 2	68 32			52 28			5	
	15 18 8		13	14 40	28 42 $\frac{1}{3}$	70 4 $\frac{1}{8}$	68 41 $\frac{1}{8}$			52 31 $\frac{3}{5}$			5	
	15 39 46 $\frac{1}{2}$		13	35 16	31 39 $\frac{3}{5}$	70 5 $\frac{1}{4}$	68 42			52 32 $\frac{1}{3}$			5	
♀ — 12.	Noon.				50 33 $\frac{1}{2}$					52 47 $\frac{1}{2}$	56 $\frac{1}{4}$	38	5	Ramfden's Quad. Dollond's Quad.
					50 32 $\frac{3}{4}$					52 48 $\frac{1}{4}$				
	23 45 52 $\frac{1}{2}$		21	40 48	23 55 $\frac{3}{4}$	70 59 $\frac{1}{2}$	69 37			52 20 $\frac{1}{8}$		38	5	
	13 45 44		11	39 41	15 44 $\frac{4}{5}$	72 12 $\frac{1}{8}$	70 50 $\frac{1}{4}$			53 34 $\frac{2}{3}$			5	
	14 22 51 $\frac{1}{2}$		12	16 43	21 15	72 14 $\frac{3}{8}$	70 53 $\frac{1}{2}$			53 37 $\frac{1}{8}$	48	35	5	

ON BOARD THE RESOLUTION.

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1773.	Time by Watch K.		Time by Watch A. No. 3.		Altitude of the ☉'s L. L.	Longitude E. by K.	Longitude E. by A.	Latitude S.	Thermom.		No. of Obs.	Remarks.
	H	M	H	M					A.	B.		
Feb. 13.	Noon.				49 6 $\frac{1}{2}$			54 54 $\frac{2}{3}$	55 $\frac{1}{2}$	36		
☉ — 14.	23	51 28 $\frac{1}{2}$	21	44 45	21 14 $\frac{2}{3}$	73 25 $\frac{1}{8}$	72 4 $\frac{1}{4}$	54 9 $\frac{1}{2}$	57 $\frac{1}{2}$	38 $\frac{1}{4}$	5	
	15	4 47 $\frac{1}{2}$	12	55 25 $\frac{1}{2}$	29 7 $\frac{1}{3}$	78 28	77 9 $\frac{1}{4}$	55 40 $\frac{2}{3}$	56	36	7	
	17	6 26			41 51 $\frac{1}{2}$	Ship's course S. S. E. 7 $\frac{1}{2}$ miles an hour.		56 35 $\frac{1}{2}$	54 $\frac{1}{2}$	35	5	Very hazy.
☽ — 15.	19	39 58 $\frac{1}{2}$			44 2 $\frac{2}{3}$			56 53			4	
	23	38 6			18 27 $\frac{2}{3}$	80 8 $\frac{7}{8}$	78 50 $\frac{1}{2}$	57 4	55	36 $\frac{1}{2}$	5	
	16	39 17	14	28 0	29 41 $\frac{1}{2}$	Ship's course E. two miles an hour.		57 16	46	35	5	
☽ — 16.	19	46 4			42 36 $\frac{1}{3}$						5	
☽ — 17.	13	43 18	11	28 58	19 36	82 47	81 34 $\frac{1}{4}$	57 53 $\frac{3}{8}$	44	32	4	
	13	59 51 $\frac{1}{2}$	11	45 34	21 49	82 54 $\frac{1}{2}$	81 42	57 54	44	32	2	
☽ — 18.	Noon.				43 21			57 57	53	33		
	23	43 28 $\frac{1}{2}$	21	28 34	14 32 $\frac{1}{2}$	84 32 $\frac{1}{2}$	83 7 $\frac{1}{2}$	58 2 $\frac{3}{4}$	56 $\frac{1}{2}$	33	5	
☽ — 19.	Noon.				42 27:			58 30	52 $\frac{3}{4}$	35		
	13	48 1	11	30 32 $\frac{1}{2}$	23 35 $\frac{1}{2}$	90 43 $\frac{7}{8}$	89 33 $\frac{1}{4}$	58 47 $\frac{1}{8}$	43 $\frac{1}{2}$	32 $\frac{1}{2}$	5	
☽ — 20.	Noon.				41 49 $\frac{1}{2}$			58 46 $\frac{1}{4}$	54 $\frac{1}{2}$	35		Ramsden's Q.
					41 48 $\frac{1}{2}$			58 47 $\frac{1}{4}$				Dollond's Q.
☉ — 21.	23	33 10	21	15 2	11 26 $\frac{7}{8}$	91 38 $\frac{7}{8}$	90 28 $\frac{7}{8}$	58 46 $\frac{1}{8}$			9	
☽ — 23.	Noon.		10	54 21	19 56 $\frac{1}{2}$	93 21 $\frac{1}{4}$	92 14	59 18 $\frac{2}{3}$	45 $\frac{1}{2}$	34	3	Very cloudy.
					38 29:			61 1 $\frac{1}{2}$	54 $\frac{3}{4}$	35		Ditto.
☽ — 24.	15	37 27			33 19	Sun N. 80 E. Ship's course S. E. 2 miles an hour.		60 49	56	36 $\frac{1}{2}$	5	Very hazy.
☽ — 25.	18	11 7 $\frac{1}{2}$			37 34 $\frac{3}{4}$						4	
	22	17 39	19	51 19	17 16 $\frac{1}{2}$	95 27 $\frac{1}{8}$	94 26 $\frac{1}{4}$	60 49 $\frac{1}{2}$	57 $\frac{1}{4}$	36 $\frac{1}{4}$	5	
	12	40 59 $\frac{1}{2}$	10	13 37	16 2 $\frac{2}{3}$	97 7 $\frac{3}{8}$	96 8 $\frac{5}{8}$	60 58 $\frac{3}{8}$			4	
☽ — 26.	Noon.				37 15 $\frac{3}{4}$			61 8	57	36 $\frac{1}{4}$		
☽ — 27.	12	52 6 $\frac{1}{2}$	10	21 27 $\frac{1}{2}$	20 5	103 41 $\frac{1}{4}$	102 46	60 3	45	35 $\frac{1}{4}$	4	
☉ — 28.	Noon.				37 41 $\frac{3}{4}$			59 57 $\frac{1}{2}$	50 $\frac{1}{2}$	36 $\frac{1}{2}$		
☽ March 3.	Noon.				36 14 $\frac{1}{2}$:			60 16 $\frac{1}{2}$	55	38		
	19	9 58	16	34 17	29 0 $\frac{1}{10}$	110 5 $\frac{7}{8}$	109 11	60 13 $\frac{1}{4}$			5	
☽ — 5.	Noon.				35 6 $\frac{1}{2}$:			60 38 $\frac{2}{3}$	55 $\frac{1}{2}$	37 $\frac{1}{4}$		
	19	44 27 $\frac{1}{2}$	17	5 24	21 58	116 58 $\frac{3}{8}$	116 0	60 26 $\frac{1}{3}$				
☽ — 6.	20	37 31	17	56 38	15 11 $\frac{1}{3}$	118 34 $\frac{5}{8}$	117 47 $\frac{1}{2}$	59 56 $\frac{1}{2}$	54	37	7	
☉ — 7.	11	8 12	8	24 33 $\frac{1}{2}$	20 27 $\frac{3}{4}$	120 35	119 53 $\frac{1}{4}$	59 44	46 $\frac{1}{4}$	35 $\frac{1}{4}$		
☽ — 8.	Noon.				34 51 $\frac{1}{2}$			59 44	54 $\frac{3}{4}$	40		Dollond's Q.
					34 52			59 43 $\frac{3}{4}$				Ramsden's Q.
	19	48 57 $\frac{1}{2}$	17	4 43	19 8	120 39 $\frac{1}{4}$	120 6 $\frac{1}{4}$	59 44 $\frac{3}{4}$			5	
☽ — 9.	Noon.				35 17 $\frac{3}{8}$:			58 55 $\frac{1}{2}$	51 $\frac{1}{2}$	37		
☽ — 10.	Noon.				35 43			58 6	48 $\frac{1}{2}$	35		
	11	12 30 $\frac{1}{2}$	8	24 7 $\frac{1}{2}$	17 47	129 15 $\frac{3}{8}$	128 34 $\frac{1}{4}$	57 53 $\frac{1}{8}$	44	35	4	
						Ship's course S. E. 6 $\frac{1}{2}$ miles an h. ☉ N. 17° W. at 2d Observat.						
☽ — 11.	15	46 13			34 54 $\frac{3}{8}$			58 10 $\frac{1}{2}$			4	
	17	7 31			30 52 $\frac{3}{4}$						4	

1773.	Time by Watch K.		Time by Watch A. No. 3.		Altitude of the ☉'s L. L.	Longitude East by K.	Longitude East by A.	Latitude South.	Thermom.		No. of Obs.	Remarks.
	H	"	H	"					A.	B.		
4 March 11.	10	44 30	7	54 29 $\frac{1}{2}$	14 28 $\frac{1}{10}$	130 49 $\frac{1}{2}$	130 10 $\frac{1}{2}$	58 55 $\frac{1}{2}$	47	37 $\frac{1}{2}$	5	
♀ — 12.		Noon.			34 7			58 55 $\frac{1}{2}$	56 $\frac{1}{4}$	39 $\frac{1}{2}$		
♂ — 13.		Noon.			33 57			58 42	53 $\frac{3}{4}$	36 $\frac{1}{4}$		
	18	32 33	15	40 2	20 41 $\frac{1}{10}$	133 14 $\frac{1}{2}$	132 37 $\frac{1}{2}$	58 43 $\frac{1}{2}$	53	35	5	
☉ — 14.		Noon.			33 54			58 21 $\frac{1}{2}$	51 $\frac{1}{2}$	33		
	18	37 5 $\frac{1}{2}$	15	43 15	18 45 $\frac{1}{2}$	135 52 $\frac{1}{2}$	135 17 $\frac{1}{2}$	58 23			5	
	11	56 21 $\frac{1}{2}$	9	1 20 $\frac{1}{2}$	24 41 $\frac{1}{2}$	138 32 $\frac{1}{2}$	137 58 $\frac{1}{2}$	58 58 $\frac{1}{2}$	41	31 $\frac{1}{2}$	5	
☾ — 15.		Noon.			32 48			59 4 $\frac{1}{4}$	50	34		Ramſden's Q.
					32 47 $\frac{1}{2}$			59 4 $\frac{1}{2}$				Dollond's Q.
	10	9 28 $\frac{1}{2}$	7	13 0	14 7 $\frac{1}{8}$	141 21 $\frac{1}{2}$	140 48 $\frac{1}{2}$	58 52 $\frac{3}{8}$	41	33 $\frac{1}{4}$	1	
	12	22 20	9	25 45 $\frac{1}{2}$	27 42 $\frac{1}{2}$	141 49 $\frac{1}{2}$	141 15 $\frac{1}{2}$	58 52 $\frac{1}{8}$			4	
	12	30 43 $\frac{2}{3}$	9	34 9	28 18 $\frac{2}{3}$	141 45 $\frac{2}{3}$	141 11 $\frac{1}{2}$	58 52 $\frac{1}{2}$			6	
♂ — 16.		Noon.			32 37			58 51 $\frac{1}{2}$	53	35 $\frac{1}{2}$		
	18	57 8 $\frac{1}{2}$	16	0 7	15 56 $\frac{3}{4}$	143 7 $\frac{3}{8}$	142 34 $\frac{1}{2}$	58 53	55 $\frac{1}{2}$	36	5	
♀ — 17.	19	8 21			8 33 $\frac{3}{8}$	146 43 $\frac{3}{8}$		58 3			1	
4 — 18.		Pocket Watch.	14 48 35 $\frac{1}{2}$		33 26 $\frac{1}{2}$	Ship's courſe N. E. by N. 6 $\frac{1}{2}$ miles an hour.		56 26 $\frac{2}{3}$			2	
			16 31 53		26 36 $\frac{1}{3}$						5	
	17	50 26	14	50 16	17 19 $\frac{7}{8}$	149 30 $\frac{1}{2}$	148 59 $\frac{1}{2}$	56 8				
♀ — 19.	9	37 30	6	34 43	16 45 $\frac{1}{2}$	153 3 $\frac{1}{2}$	152 34	53 43 $\frac{7}{8}$	51 $\frac{3}{4}$	45 $\frac{1}{2}$	5	
♂ — 20.		Noon.			36 31 $\frac{1}{2}$			53 22 $\frac{2}{3}$	54 $\frac{1}{2}$	45		
	17	56 48 $\frac{1}{2}$	14	53 27	14 29 $\frac{9}{10}$	154 16 $\frac{1}{2}$	153 47 $\frac{1}{2}$	52 48			5	
☉ — 21.	10	45 24	7	39 16	29 18 $\frac{5}{8}$	158 14 $\frac{1}{2}$	157 48 $\frac{1}{2}$	50 11 $\frac{1}{2}$			4	
☾ — 22.		Noon.			39 12 $\frac{3}{4}$			49 55	56 $\frac{1}{4}$	47		
	17	15 34	14	8 36	18 20 $\frac{3}{4}$	158 52 $\frac{1}{2}$	158 27 $\frac{5}{8}$	49 30			5	
	9	7 6	5	59 19 $\frac{1}{2}$	17 57 $\frac{1}{2}$	160 14 $\frac{1}{3}$	159 52 $\frac{1}{2}$	48 3 $\frac{1}{3}$	51 $\frac{1}{2}$	47	5	
♂ — 23.		Noon.			40 58 $\frac{1}{2}$			47 45 $\frac{1}{2}$	58	49		
	17	13 24 $\frac{1}{2}$	14									

1773.	Time by Watch K.	Time by Watch A. No. 3.	Altitude of the ☉'s L. L.	Longi- tude East by K.	Longi- tude East by A.	Latitude S.		Thermom.		No. of Obs.	Remarks.
	H	H	°	°	°	°	'	A.	B.		
	vember 14th, at noon, it was 4 h. 12' 33", 61 too slow for mean time at the Cape, and it was then losing at the rate of 90", 642 a day; wherefore it ought to have been too slow for mean time on the 18th, at noon, by 4 h. 18' 36", 2; but as I then found it only 1 h. 29' 39", 2 too slow, it is plain that it had been set faster than it would otherwise have been by 2 h. 48' 57". If from this we subtract 1 h. 5' 36", what it would have been too slow according to its Greenwich rate of going, and what it was set too slow for mean time at Drake's Island, there will remain 1 h. 43' 21" for what it should be too fast for mean time at Drake's Island on 8 April the 6th, at noon, by the time at Dusky Bay; which being added to 14 h. 48' 4", 6, what it was that day actually too slow for mean time at that place, gives 16 h. 31' 25", 6 = 247° 51' 24" for the Longitude of Dusky Bay, East of Drake's Island, as above.										
	It appeared, moreover, that the Watch made by Mr. Kendall was too slow for mean time at Dusky Bay, on 6 April 25th, at noon, by 11 h. 13' 7", 3; and that made by Mr. Arnold, (No. 3.) by 15 h. 20' 5", 8. On these suppositions, and that the true Longitude of the Observatory was 166° 18' East, I computed the Longitudes of the ship between this place and Queen Charlotte's Sound.										
8 May 11.	Noon.		26 21½			45 34½		58	44½		
24 — 13	16 51 49½	12 17 40	5 32½	165 55	165 35½	45 26½				5	
8 — 14	10 18 0		22 12½	170 18½		41 54				4	
	Noon.		29 17½			41 52½		65½	58		
	16 38 36½	11 59 39½	6 20½	170 28	170 1½	41 49				5	
15 — 15	16 47 33	4 7 35	11 17½	170 59½	170 29½	41 19		61	53	5	
16 — 16	Noon.		29 43½			41 13		62	56		
16 — 16	8 19 47	3 36 20½	8 9½	172 38½	172 4½	40 25½		56	51½	5	
17 — 17	9 50 45		20 54½	172 35½		40 29½					
	Noon.		29 55			40 33½					
18 — 18	Noon.		29 55½			40 33½					
			29 12½			41 3					
Although we anchored in Queen Charlotte's Sound the 18th, I did not attempt carrying any Instruments on shore there before the 24th, being all that time in daily expectation of leaving it; but seeing then no likelihood of going soon, I carried the Astronomical Quadrant on shore at a beach near the ship, and was fortunate enough to get equal altitudes that day, the 30th, and June 3, (see p. 48, 49.) I noted the times by Mr. Kendall's Watch, and compared Mr. Arnold's (No. 3.) with it. The comparisons were,											
1773.		Watch K.			Watch A.						
		H			H						
1 May 24.		13	46	8½	8	50					
30 — 30.		15	3	16½	9	57					
14 June 3.		12	45	6½	7	32					

1773.	Time by Watch K.	Apparent Time.	Altitude of the ☉'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.	
	H	H	°	°	°	A.	B.			
	Hence I found that the former was now gaining at the rate of $9''.05$, and the latter losing at the rate of $94''.158$ a day on mean time. The former, allowing its Dusky Bay rate, gave the difference of Longitude between this place and that $7^{\circ} 26' 30''$; and allowing its rate of going as determined now, $7^{\circ} 45' 54''$; that is $173^{\circ} 44' 39''$, and $174^{\circ} 4' 3''$ East of Greenwich. If the rate which Mr. Arnold's Watch was going at when at Dusky Bay be allowed, it will make the difference of Longitude between those places $6^{\circ} 40' 56''$; and by allowing the rate it was going at here $7^{\circ} 34' 24''$; that is $172^{\circ} 59' 5''$, and $173^{\circ} 52' 33''$ between this place and Greenwich. If their Greenwich rates be allowed them all the way from England, the Watches will place Queen Charlotte's Sound $174^{\circ} 7' \frac{3}{4}$, and $271^{\circ} 50' 33''$ East of Drake's Island respectively; that is $169^{\circ} 51' \frac{5}{8}$, and $267^{\circ} 34' 25''$ East of Greenwich. May 28th, that lock of Mr. Arnold's Watch, which Lieutenant Cooper had the key of, got spoiled; I suppose by a wrong key being given, by mistake, to Lieutenant Pickersgill, who attended that day for Lieutenant Cooper to open the box; so that on the 29th it could not be opened. After unlocking the other two locks, a screw-driver was introduced between the box and lid, and the lock forced by turning the screw-driver round: I am certain no injury did, or could possibly happen to the Watch by doing this. The lock being damaged, it was taken off, and the Watch trusted under the other two until June 3, when we got it repaired, and put on again, and Mr. Cooper locked it as before. I have been thus circumstantial, because when we came to wind the Watch up, June 7th, at noon, I found the fuzee would not turn, and we were obliged to let the Watch go down, and stand ever afterwards. Mr. Kendall's Watch was too slow for mean time at Queen Charlotte's Sound, on June 3, at noon, by 11 h. $38' 17''.97$; and in computing the Longitude of the ship by this Watch, in our run from hence to Otaheite, I have supposed its rate to be as above-mentioned, and that the true Longitude of the Beach in Queen Charlotte's Sound, where I observed, is $173^{\circ} 46' 1'' \frac{1}{2}$, which results from Mr. Bayley's Observations made here; and the experiments mentioned on p. 49.									
June 7.		Noon.	25 55 $\frac{1}{3}$	41 8 $\frac{1}{3}$		59 $\frac{3}{4}$	55			
8.	9 6 31 $\frac{1}{2}$	Noon.	11 36 $\frac{1}{4}$	41 48 $\frac{1}{2}$	174 39 $\frac{1}{4}$	56	51 $\frac{1}{2}$	5		
9.	16 1 39	Noon.	25 2 $\frac{1}{4}$	41 56 $\frac{1}{8}$		58	52			
10.		Noon.	6 30 $\frac{2}{3}$	42 6 $\frac{1}{4}$	175 20	60 $\frac{1}{2}$	52	3		
11.	9 41 34 $\frac{1}{2}$	Noon.	24 1 :	42 57 $\frac{1}{2}$		58 $\frac{3}{4}$	55			
12.		Noon.	15 43 $\frac{1}{2}$	43 49 $\frac{5}{8}$	178 49 $\frac{1}{4}$	57	53 $\frac{1}{2}$	6		
13.	9 51 59	Noon.	22 54 :	43 54 $\frac{3}{4}$		60 $\frac{1}{4}$	54			
14.	8 53 33 $\frac{1}{3}$	21 16 18	15 52 $\frac{2}{3}$	46 8 :				5	) Very uncertain on account of the Latit.	
15.		Noon.	10 42 $\frac{9}{10}$	46 41 $\frac{1}{8}$	185 17 $\frac{1}{2}$			6		
16.	14 30 0	2 53 26	19 44 $\frac{1}{2}$	46 46 $\frac{5}{8}$		48 $\frac{1}{2}$	56			
17.	9 27 33	21 52 8	9 32 $\frac{1}{10}$	46 52	185 29 $\frac{1}{4}$	48	56	5		
18.		Noon.	4 20	46 22				4		
19.	8 38 16	21 9 41	20 8 $\frac{1}{2}$	46 18 $\frac{1}{4}$		56 $\frac{1}{2}$	49 $\frac{1}{4}$			
20.		Noon.	10 27 $\frac{2}{3}$	45 59 $\frac{2}{3}$	187 43 $\frac{7}{8}$	54 $\frac{1}{2}$	49 $\frac{1}{2}$	5		
	14 10 0	2 44 25 $\frac{1}{2}$	20 30 $\frac{3}{4}$	45 54		55	48			
	8 8 39	21 4 16	11 14 $\frac{3}{8}$	45 48	188 30 $\frac{1}{2}$	55	47 $\frac{1}{2}$	5		
			11 0 $\frac{2}{3}$	44 26	194 0 $\frac{1}{2}$	51 $\frac{1}{2}$	48 $\frac{1}{2}$	5		

ON BOARD THE RESOLUTION.

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1773.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	M					A.	B.		
D June 21.			Noon.	21 56 $\frac{3}{4}$	44 26		53 $\frac{1}{2}$	50 $\frac{1}{2}$		
♂ — 22.	8 4 41		21 5 31	11 3	44 34 $\frac{1}{2}$	195 45	53	50 $\frac{1}{2}$	5	
			Noon.	21 47 $\frac{1}{2}$	44 36		55 $\frac{1}{2}$	52 $\frac{1}{2}$		
	11 12 20 $\frac{1}{2}$			21 42 $\frac{1}{2}$	44 35 $\frac{1}{2}$	Ship's course East, 2 miles an hour.			4	
	13 46 55			11 32 $\frac{1}{2}$					5	
	13 46 55		2 49 53	11 32 $\frac{1}{2}$	44 37	196 0 $\frac{1}{2}$			5	
♀ — 23.			Noon.	21 46	44 37 $\frac{1}{2}$		56	50 $\frac{1}{2}$		
	13 53 18		3 1 24	10 13 $\frac{1}{2}$	44 37 $\frac{1}{2}$	197 23			5	
	14 6 46		3 14 56 $\frac{1}{2}$	8 34 $\frac{1}{2}$	44 37 $\frac{1}{2}$	197 24			7	
♀ — 25.	8 7 1 $\frac{1}{2}$		21 10 52	12 53 $\frac{1}{2}$	43 3 $\frac{1}{2}$	196 34 $\frac{1}{2}$	58	54	6	Very cloudy.
♂ — 26.			Noon.	23 17 $\frac{1}{2}$	43 9 $\frac{1}{2}$		60	55 $\frac{1}{2}$		
	13 59 16		3 4 32	10 54 $\frac{1}{2}$	43 17 $\frac{1}{2}$	196 58 $\frac{1}{2}$			3	Very uncertain.
⊙ — 27.			Noon.	23 55 $\frac{1}{2}$	42 34		59	53 $\frac{1}{2}$		
D — 28.			Noon.	24 7 $\frac{1}{2}$			60	52 $\frac{1}{2}$		Very foggy.
	6 49 18		19 58 28	3 50 $\frac{1}{2}$	42 37 $\frac{1}{2}$	198 11 $\frac{1}{2}$	58	51	5	
	7 57 37		21 7 5	12 51 $\frac{1}{2}$	42 39 $\frac{1}{2}$	198 14 $\frac{1}{2}$			3	Very cloudy.
♂ — 29.			Noon.	23 48 $\frac{1}{2}$	42 46 $\frac{1}{2}$		61 $\frac{1}{2}$	52 $\frac{1}{2}$		
	14 6 56 $\frac{1}{2}$		3 18 42 $\frac{1}{2}$	9 30	42 54	198 35 $\frac{1}{2}$			5	
	7 30 35		20 43 45	9 40 $\frac{1}{2}$	43 5 $\frac{1}{2}$	199 15			5	
♀ — 30.			Noon.	23 32 $\frac{1}{2}$	43 6		59	51 $\frac{1}{2}$		
	7 52 47		21 14 6	13 21 $\frac{1}{2}$	43 11 $\frac{1}{2}$	201 22 $\frac{1}{2}$	55	48	5	
u July 1.			Noon.	23 35	43 7 $\frac{1}{2}$		56	49		Ramsden's Quad. Dollond's ditto.
	13 37 7		2 59 18	11 51 $\frac{1}{2}$	43 7 $\frac{1}{2}$	201 36 $\frac{1}{2}$	57	49 $\frac{1}{2}$	5	
	6 51 48 $\frac{1}{2}$		20 17 51 $\frac{1}{2}$	6 25	43 2 $\frac{1}{2}$	202 40	52 $\frac{1}{2}$	45	6	
♀ — 2.			Noon.	23 44 $\frac{1}{2}$	43 2 $\frac{1}{2}$		56 $\frac{1}{2}$	47		
	14 3 30 $\frac{1}{2}$		3 31 7	7 55 $\frac{1}{2}$	43 2 $\frac{1}{2}$	203 1 $\frac{1}{2}$			6	
	7 18 54 $\frac{1}{2}$		20 49 54	10 33 $\frac{1}{2}$	43 14	203 57 $\frac{1}{2}$	53	48	5	
♂ — 3.			Noon.	23 33 $\frac{1}{2}$	43 18		56 $\frac{1}{2}$	47 $\frac{1}{2}$		
	13 51 27		3 25 50	8 27 $\frac{1}{2}$	43 22 $\frac{1}{2}$	204 42 $\frac{1}{2}$	61	49	5	
	9 24 4 $\frac{1}{2}$			21 26 $\frac{1}{2}$						
⊙ — 4.			Noon.	22 58	43 58		54	48 $\frac{1}{2}$		
	13 48 54		3 25 12	8 19 $\frac{1}{2}$	43 48	205 23 $\frac{1}{2}$	55	49	6	
	7 41 24		21 22 50	14 31 $\frac{1}{2}$	43 18	206 45			5	Cloudy, and great sea.
	7 41 24			14 31 $\frac{1}{2}$	43 11 $\frac{1}{2}$	☉ N. 30 E. at 1st obs. and N. 44 W. at 3d. Ship's course E. N. E. 4 $\frac{1}{2}$ miles an h.			5	
D — 5.	10 45 2			23 36 $\frac{1}{2}$					3	Ditto.
	12 54 20			14 32 $\frac{1}{2}$					5	
	12 54 20		2 38 45 $\frac{1}{2}$	14 32 $\frac{1}{2}$	43 5	207 30 $\frac{1}{2}$	55 $\frac{1}{2}$	49 $\frac{1}{2}$	5	More certain.
	7 3 13 $\frac{1}{2}$		20 48 10	11 12 $\frac{1}{2}$	42 19 $\frac{1}{2}$	207 50 $\frac{1}{2}$			5	
♂ — 6.			Noon.	24 59 $\frac{1}{2}$	42 7 $\frac{1}{2}$		56 $\frac{1}{2}$	51		
	13 26 15		3 13 26 $\frac{1}{2}$	11 18 $\frac{1}{2}$	41 55 $\frac{1}{2}$	208 16 $\frac{1}{2}$			5	
	6 21 44 $\frac{1}{2}$		20 9 32 $\frac{1}{2}$	6 37	41 23	208 44 $\frac{1}{2}$	55	51	7	Hazy.
♀ — 7.			Noon.	25 51	41 22		57	52 $\frac{1}{2}$		
	13 37 19		3 27 11	9 56 $\frac{1}{2}$	41 22 $\frac{1}{2}$	208 53 $\frac{1}{2}$			5	By Lieut. Clerke.
	7 42 36 $\frac{1}{2}$		21 37 28	17 29 $\frac{1}{2}$	41 52 $\frac{1}{2}$	210 29 $\frac{1}{2}$	54 $\frac{1}{2}$	51 $\frac{1}{2}$	5	

ASTRONOMICAL OBSERVATIONS

1773.	Time by Watch K.		Apparent Time.	Altitude of the Sun's L. L.	Latitude South.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	M					A.	B.		
July 7.	7	42 36 $\frac{1}{2}$		17 29 $\frac{1}{10}$	41 58	N. 42 E. at 1st observat. Ship's course E. S. E. 6 $\frac{1}{2}$ miles an hour.			5	
July 8.	10	51 9		24 20 $\frac{2}{3}$					6	
	13	53 43	3 52 8	6 2 $\frac{7}{8}$	42 6 $\frac{1}{2}$	211 14 $\frac{1}{2}$	58	51 $\frac{1}{4}$	4	
	6	43 29 $\frac{1}{2}$		11 8 $\frac{7}{8}$	42 35 $\frac{1}{2}$	212 43 $\frac{1}{2}$			5	
July 9.			Noon.	24 47:	42 39 $\frac{1}{2}$		54 $\frac{1}{2}$	51 $\frac{1}{2}$		
	13	25 16 $\frac{1}{2}$		8 39 $\frac{3}{8}$	42 46 $\frac{1}{8}$	213 13 $\frac{1}{2}$	58	51	4	
	6	28 57	20 42 1 $\frac{1}{2}$	9 59 $\frac{1}{2}$	43 27 $\frac{1}{2}$	215 2 $\frac{1}{2}$			6	
July 10.	6	44 49 $\frac{1}{2}$		13 8 $\frac{1}{4}$	43 33 $\frac{1}{2}$	217 28			6	
July 11.			Noon.	24 7 $\frac{1}{2}$	43 34 $\frac{1}{8}$		54	47		
	12	40 9	3 5 3 $\frac{1}{2}$	11 41 $\frac{1}{2}$	43 32 $\frac{1}{2}$	218 5	55 $\frac{1}{2}$	47 $\frac{1}{2}$	5	
	6	14 37 $\frac{1}{2}$	20 44 26	10 37 $\frac{3}{4}$	43 17 $\frac{1}{2}$	219 23	52	47	9	
	6	52 53	21 23 28	15 16 $\frac{3}{8}$	43 17 $\frac{1}{2}$	219 33 $\frac{1}{2}$			8	
July 12.			Noon.	24 33 $\frac{1}{2}$	43 15 $\frac{1}{10}$		54	49		Dollond's Quad.
	13	2 7 $\frac{1}{2}$	3 34 12 $\frac{1}{2}$	8 14	43 14 $\frac{1}{2}$	219 57	56 $\frac{1}{2}$	49	6	Ramsden's ditto.
	5	46 59	20 21 3	7 46 $\frac{1}{2}$	43 2 $\frac{1}{2}$	220 29 $\frac{1}{2}$	53	47 $\frac{1}{2}$	6	
	7	3 32	21 38 27	17 13 $\frac{1}{2}$	43 2 $\frac{1}{2}$	220 42 $\frac{1}{2}$			6	
July 13.			Noon.	24 56	43 2		56 $\frac{1}{4}$	49 $\frac{1}{2}$		Dollond's Quad.
	13	4 56 $\frac{1}{2}$		7 34 $\frac{1}{2}$	42 57 $\frac{3}{4}$	221 2 $\frac{1}{2}$	57	49	4	Ramsden's ditto.
July 16.			Noon.	27 1 $\frac{1}{2}$	41 24 $\frac{1}{2}$		51	46		Very cloudy.
	12	40 33	3 28 46	10 53 $\frac{1}{2}$	41 11	224 14 $\frac{1}{2}$	51 $\frac{1}{4}$	46 $\frac{1}{4}$	5	A great sea.
	6	22 48 $\frac{1}{2}$	21 17 1 $\frac{1}{2}$	17 51 $\frac{1}{2}$	39 53	225 53 $\frac{1}{2}$			4	
July 17.			Noon.	28 51 $\frac{1}{2}$	39 43 $\frac{1}{2}$		48	44 $\frac{1}{4}$		
	12	39 49	3 35 49	11 7 $\frac{1}{8}$	39 19	226 15 $\frac{1}{4}$	49 $\frac{1}{2}$	45	4	
	5	2 41	19 58 53	8 2 $\frac{1}{2}$	38 4 $\frac{1}{2}$	226 20 $\frac{1}{4}$	49	47 $\frac{1}{2}$	7	
July 18.			Noon.	30 49 $\frac{1}{2}$	37 55 $\frac{3}{8}$		51	49 $\frac{1}{2}$		
	12	52 23 $\frac{1}{2}$	3 41 47 $\frac{1}{2}$	18 11	37 49	226 24 $\frac{1}{4}$	53 $\frac{1}{2}$	49	7	
July 19.			Noon.	32 21 $\frac{1}{2}$	36 34 $\frac{1}{2}$		55 $\frac{1}{4}$	57		
	13	1 11 $\frac{1}{2}$	3 58 30	9 36 $\frac{3}{4}$	36 25 $\frac{1}{2}$	226 41 $\frac{1}{2}$	57 $\frac{1}{2}$	53 $\frac{1}{2}$	7	
	4	55 45	19 52 29 $\frac{1}{2}$	8 38 $\frac{1}{2}$	35 38	226 35 $\frac{1}{2}$			5	
July 20.			Noon.	33 47:	35 20		58 $\frac{1}{4}$	58 $\frac{1}{4}$		
July 21.	13	0 11	3 53 16 $\frac{1}{2}$	13 2 $\frac{1}{2}$	32 24	225 46 $\frac{1}{2}$	63	61	5	
	4	56 47	19 48 2	10 23 $\frac{1}{2}$	31 23 $\frac{1}{2}$	225 19 $\frac{1}{4}$	62 $\frac{1}{4}$	61	5	Very hazy.
July 22.			Noon.	38 24 $\frac{1}{2}$	31 5 $\frac{1}{2}$		64 $\frac{1}{4}$	63		
	13	9 47	3 59 59	12 55 $\frac{1}{2}$	30 47 $\frac{3}{8}$	225 5 $\frac{1}{2}$	65	62 $\frac{1}{4}$	6	
	4	44 28		8 40 $\frac{1}{2}$	29 34	224 41 $\frac{1}{2}$	63	61 $\frac{1}{2}$	7	
July 23.			Noon.	40 19 $\frac{1}{2}$:	29 22 $\frac{1}{2}$		66	63 $\frac{1}{2}$		Cloudy.
July 25.	10	20 1		38 8	29 43 $\frac{3}{4}$	N. 46° W. at 2d Observat. Ship's course N. E. by E. 4 miles an hour.				Cloudy.
	12	14 51		24 30 $\frac{1}{2}$						
	5	20 45	20 6 4	15 28 $\frac{1}{8}$	28 58 $\frac{1}{2}$	224 4:	68	66	7	Cloudy.
July 26.			Noon.	41 27 $\frac{1}{2}$	28 52 $\frac{1}{2}$		69 $\frac{1}{2}$	66 $\frac{1}{2}$		
	12	2 14	2 48 47	26 42	28 46	224 20	71	67	5	

ON BOARD THE RESOLUTION.

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1773.	Time by Watch K.			Apparent Time.	Altitude of the ☉'s L. L.	Latitude South.	Longitude East by K.		Thermom.		Z of Obs.	Remarks.
	H	M	S	H			°	'	A.	B.		
D July 26.	12	27	5 $\frac{1}{2}$	3 13 45	22 41	28 45 $\frac{1}{4}$	224	21 $\frac{1}{2}$			6	
δ — 27.	4	49	51	19 37 3 $\frac{2}{3}$	10 43 $\frac{1}{2}$	28 1	224	31 $\frac{1}{2}$	69	61 $\frac{1}{2}$	5	
				Noon.	42 40	27 53 $\frac{1}{4}$			70	67 $\frac{1}{2}$		
	11	50	19 $\frac{1}{2}$	2 37 43	29 12 $\frac{1}{2}$	27 50 $\frac{1}{2}$	224	32 $\frac{1}{2}$	70	69	6	
	4	55	38		11 1 $\frac{1}{2}$	27 43	224	13 $\frac{1}{2}$	69	66	4	Cloudy.
δ — 28.				Noon.	43 4	27 43			70	69		
	12	18	25	3 2 24 $\frac{1}{2}$	25 32 $\frac{1}{2}$	27 45	223	46 $\frac{1}{2}$	70	68	6	
	5	7	1 $\frac{1}{2}$	19 47 46	13 10 $\frac{1}{2}$	27 38 $\frac{1}{2}$	222	58 $\frac{1}{2}$	69 $\frac{1}{2}$	68	7	Very cloudy.
4 — 29.				Noon.	43 30 $\frac{1}{2}$	27 30 $\frac{1}{2}$			70 $\frac{1}{2}$	69 $\frac{1}{2}$		
	12	51	57 $\frac{1}{2}$	3 34 21 $\frac{1}{2}$	12 22	27 26 $\frac{1}{2}$	223	24	74	70	6	Hazy.
	5	12	53 $\frac{1}{2}$	19 57 55	15 29 $\frac{1}{2}$	27 8 $\frac{1}{2}$	224	5			5	
♀ — 30.				Noon.	44 11	27 4 $\frac{1}{2}$			71 $\frac{1}{2}$	71		
h — 31.				Noon.	45 10 $\frac{1}{4}$	26 19 $\frac{1}{2}$			69 $\frac{1}{2}$	68		
⊙ Aug. 1.	13	47	41	4 36 28 $\frac{1}{2}$	9 32 $\frac{7}{8}$	26 9 $\frac{1}{2}$	225	3 $\frac{1}{2}$	69 $\frac{1}{2}$	68	8	
⊙ — 2.	4	39	55	19 30 55	12 18 $\frac{1}{2}$	23 25 $\frac{1}{2}$	225	39	68 $\frac{1}{2}$	68	5	
				Noon.	48 45 $\frac{1}{2}$	23 13 $\frac{1}{2}$			69 $\frac{1}{2}$	69 $\frac{1}{2}$		
	13	6	48	3 57 30	18 54	23 6 $\frac{1}{2}$	225	34 $\frac{1}{2}$			5	
	4	30	38	19 22 13	11 5 $\frac{1}{2}$	22 21 $\frac{1}{2}$	225	48 $\frac{1}{2}$	70 $\frac{1}{2}$	69 $\frac{1}{2}$	5	
δ — 3.				Noon.	50 7	22 8 $\frac{1}{2}$			71	71 $\frac{1}{2}$		
	13	41	55		12 7 $\frac{1}{2}$	22 0	225	53 $\frac{1}{2}$	73 $\frac{1}{2}$	72 $\frac{3}{4}$	5	
	4	40	54	19 32 43	13 47 $\frac{1}{2}$	21 27	225	53 $\frac{1}{2}$	72	72	5	
δ — 4.				Noon.	51 13	21 18			73 $\frac{1}{2}$	74		
	13	34	53 $\frac{1}{2}$	4 28 6	13 46 $\frac{1}{2}$	21 12	226	14 $\frac{1}{2}$			5	
	6	13	27	21 10 3 $\frac{1}{2}$	33 32 $\frac{1}{2}$	20 46 $\frac{1}{2}$	227	21 $\frac{1}{2}$	77	76 $\frac{1}{2}$	5	
4 — 5.				Noon.	52 7 $\frac{1}{2}$	20 29 $\frac{1}{2}$						
	13	59	24 $\frac{1}{2}$	4 58 22 $\frac{1}{2}$	7 43 $\frac{1}{2}$	20 28 $\frac{1}{2}$	227	41 $\frac{1}{2}$	80	77 $\frac{1}{2}$	5	
	4	34	33 $\frac{1}{2}$	19 34 28 $\frac{1}{2}$	15 3 $\frac{1}{2}$	19 54 $\frac{1}{2}$	227	56 $\frac{1}{2}$	76 $\frac{1}{2}$	77	3	
♀ — 6.				Noon.	53 16	19 47 $\frac{1}{2}$			77 $\frac{1}{2}$	78		
h — 7.				Noon.	54 28 $\frac{1}{2}$	18 51 $\frac{1}{2}$			73 $\frac{1}{2}$	75		
	5	44	33 $\frac{1}{2}$	20 29 48	27 42	18 11	224	18 $\frac{1}{2}$			5	Very cloudy.
⊙ — 8.				Noon.	55 32 $\frac{1}{2}$	18 4 $\frac{1}{2}$			74 $\frac{1}{2}$	75		
	5	28	7 $\frac{1}{2}$		22 47 $\frac{1}{2}$	17 44 $\frac{1}{2}$	222	5 $\frac{1}{2}$			5	Cloudy.
	6	38	57 $\frac{1}{2}$	21 14 49	37 2 $\frac{1}{2}$	17 44 $\frac{1}{2}$	221	57 $\frac{1}{2}$			6	
⊙ — 9.				Noon.	56 13	17 41 $\frac{1}{2}$			75 $\frac{1}{2}$	76 $\frac{1}{2}$		
	5	41	42 $\frac{1}{2}$	20 8 34	23 54 $\frac{1}{2}$	17 24 $\frac{1}{2}$	219	57 $\frac{1}{2}$	76	74 $\frac{1}{2}$	4	
	6	53	24	21 20 41	38 30 $\frac{1}{2}$	17 24 $\frac{1}{2}$	219	49			4	
δ — 10.				Noon.	56 58 $\frac{1}{2}$	17 22 $\frac{1}{2}$			76 $\frac{1}{2}$	78 $\frac{1}{2}$		
	13	36	41 $\frac{1}{2}$	4 1 37	21 48 $\frac{1}{2}$	17 21	219	13 $\frac{1}{2}$	77	77	5	
	5	1	44 $\frac{1}{2}$	19 21 25	13 53 $\frac{1}{2}$	17 17 $\frac{1}{2}$	217	55	75 $\frac{1}{2}$	75	3	Very hazy.
δ — 11.				Noon.	57 11 $\frac{1}{2}$	17 17 $\frac{1}{2}$			77 $\frac{1}{2}$	78 $\frac{1}{2}$		
	13	31	25	3 48 56	24 41	17 17 $\frac{1}{2}$	217	22 $\frac{3}{4}$			5	
	5	24	54 $\frac{1}{2}$	19 38 9	17 42	17 12 $\frac{1}{2}$	216	18 $\frac{1}{2}$	76 $\frac{1}{2}$	76 $\frac{1}{2}$	3	
	5	59	10	20 12 21 $\frac{1}{2}$	25 6	17 12 $\frac{1}{2}$	216	17 $\frac{1}{2}$			5	Hazy.
4 — 12				Noon.	57 36 $\frac{1}{2}$	17 11			78	78 $\frac{2}{3}$		
	14	27	32	4 38 3	14 9	17 11	215	37	78 $\frac{1}{2}$	79	5	
	5	22	43	19 30 36	16 6 $\frac{1}{2}$	17 16 $\frac{1}{2}$	214	57 $\frac{1}{2}$	79	76 $\frac{1}{2}$	7	

1773.	Time by Watch K.	Apparent Time.	Altitude of the ☉'s L. L.	Latitude S	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H ' "	H ' "	° ' "	° ' "	° ' "	A.	B.		
♀ Aug. 13		Noon.	57 49 $\frac{1}{2}$	17 16 $\frac{1}{4}$		79	79 $\frac{1}{2}$		
	14 28 36	4 34 8	15 6 $\frac{3}{8}$	17 16 $\frac{1}{4}$	214 22 $\frac{1}{2}$	78 $\frac{1}{2}$	79	4	
	5 42 57 $\frac{1}{2}$		19 10 $\frac{1}{2}$	17 13	213 12 $\frac{3}{8}$	79 $\frac{1}{2}$	78	7	
♂ — 14		Noon.	58 9:	17 15		79 $\frac{1}{2}$	79		
	13 59 4	3 57 51	23 11 $\frac{1}{8}$	17 17 $\frac{1}{2}$	212 40	79	79	4	
	5 13 13	19 7 23	10 59 $\frac{1}{4}$	17 42 $\frac{1}{4}$	211 31	78 $\frac{1}{2}$	77	5	
	5 37 7	19 31 36 $\frac{1}{2}$	16 26 $\frac{1}{2}$	17 43 $\frac{1}{2}$	211 37 $\frac{1}{2}$	78 $\frac{1}{2}$	77	4	
☉ — 15.		Noon.	57 56 $\frac{1}{2}$	17 46 $\frac{1}{2}$		78 $\frac{1}{2}$	80		
	14 40 58 $\frac{1}{2}$	4 32 55 $\frac{1}{2}$	15 26 $\frac{3}{8}$	17 46 $\frac{1}{2}$	210 57 $\frac{1}{2}$	78 $\frac{1}{2}$	80	5	
	6 1 27		20 49 $\frac{1}{8}$	17 44		78 $\frac{1}{2}$	79	4	
♂ — 16.		Noon.	58 17 $\frac{1}{4}$	17 44 $\frac{3}{4}$		80	80 $\frac{1}{4}$		
♂ — 18.	13 59 12	3 48 40	25 12 $\frac{1}{2}$	17 46 $\frac{1}{2}$	210 18	80	80	5	A little dubious.
	8 30 52 $\frac{1}{2}$	22 20 37 $\frac{1}{2}$	50 36	17 46 $\frac{1}{2}$	210 22	79 $\frac{1}{2}$	79 $\frac{1}{2}$	5	
♂ — 19		Noon.	59 12	17 47 $\frac{1}{2}$		81	80		Dollond's Quadrant. Ramsden's Quadrant.
			59 13	17 46 $\frac{1}{2}$					
	13 15 48	3 5 27	34 48 $\frac{1}{4}$	17 46 $\frac{1}{2}$	210 19 $\frac{1}{4}$	81	80	5	
	8 37 14	22 27 6 $\frac{1}{2}$	51 51	17 46 $\frac{1}{2}$	210 22 $\frac{1}{4}$	79 $\frac{1}{2}$	79 $\frac{1}{2}$	5	
♀ — 20.		Noon.	59 33 $\frac{1}{2}$	17 46		79 $\frac{1}{2}$	79 $\frac{1}{2}$		At anchor in Oaitipeha Bay, Otaheite.
			59 33 $\frac{3}{4}$	17 45 $\frac{3}{4}$					A little uncertain.
	13 18 55 $\frac{1}{2}$	3 8 40 $\frac{1}{2}$	34 19 $\frac{3}{4}$	17 46 $\frac{1}{2}$	210 20 $\frac{1}{4}$	81	79 $\frac{1}{4}$	5	
	8 47 54	22 37 42	53 37 $\frac{1}{2}$	17 46 $\frac{1}{2}$	210 19 $\frac{1}{4}$	80 $\frac{1}{2}$	84 $\frac{1}{2}$	5	
♂ — 21		Noon.	59 51	17 46 $\frac{3}{4}$		80 $\frac{1}{2}$	82		Dollond's Quadrant.
☉ — 22		Noon.	60 12 $\frac{3}{4}$	17 46 $\frac{1}{2}$	W. W.	81	81		All with Quadrants made by Ramsden.
			60 12 $\frac{1}{2}$	17 46 $\frac{1}{4}$	Clerke.				
			60 11 $\frac{1}{2}$	17 47 $\frac{1}{2}$	Gilbert.				
	13 53 9 $\frac{1}{2}$	3 43 4	27 21 $\frac{1}{8}$	17 46 $\frac{1}{2}$	210 20	81 $\frac{1}{4}$	80 $\frac{1}{4}$	5	
♂ — 24.		Noon.	60 58:	17 42		76 $\frac{1}{4}$	75 $\frac{1}{2}$		The Bay S. W. $\frac{1}{2}$ S. 6 m.
	5 4 56 $\frac{1}{2}$	18 54 26	9 19 $\frac{1}{2}$	17 29	210 9 $\frac{1}{8}$	75	74 $\frac{1}{4}$	5	
♂ — 25.		Noon.	61 31 $\frac{1}{2}$	17 29 $\frac{3}{4}$		76 $\frac{1}{2}$	78		Dollond's Quadrant. Ramsden's ditto.
			61 32 $\frac{1}{4}$	17 28 $\frac{1}{2}$					

About five in the evening we anchored in Matavai Bay, and lost no time in getting up our clocks and instruments. On the 27th, I compared the watch K with the clock B, (see p. 52.) and found it too slow for mean time on that day at noon by 13 h. 50' 22", 4. Consequently, allowing the rate it went at in Queen Charlotte's Sound, it will give the difference of longitude between that place and Point Venus in Otaheite 36° 13' 10 $\frac{1}{2}$ "; or, taking Queen Charlotte's Sound to be in 174° 13' 30" East, which is the mean result of all the Observations which have been made there both by Mr. Bayley and myself, it will place Point Venus 210° 26' 40 $\frac{1}{2}$ " East of Greenwich. If we reckon all the way from Drake's Island at the rate it went at when at Greenwich, before the voyage, it makes Point Venus 206° 5' 54" East of Drake's Island; that is, 201° 49' 47" East of Greenwich.

The watch was gaining here at the rate of 8", 863 a day on mean time, and was too slow for mean time at Point Venus, on 3 August 31 at noon, by 13 h. 49' 47", 5: on which suppositions, and that the true longitude of Point Venus is 210° 25' 10 $\frac{1}{2}$ " East, the following longitudes of the ship are computed.

ON BOARD THE RESOLUTION.

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1773.	Time by Watch K.		Apparent Time.	Altitude of the Sun's L. L.	Latitude South.	Longitude East by K.	Thermom.		No of Obs.	Remarks.
	H	M					A.	B.		
Sept. 2.			Noon.	64 59 $\frac{1}{2}$	16 51 $\frac{1}{2}$		76 $\frac{1}{2}$	77		
3.			Noon.	65 28 $\frac{1}{2}$	16 45		66 $\frac{1}{2}$	66 $\frac{1}{2}$		
	15	2 50 $\frac{1}{2}$		14 57 $\frac{1}{2}$	16 44 $\frac{1}{2}$	208 51 $\frac{1}{2}$	77 $\frac{1}{2}$	77 $\frac{1}{2}$	5	
4.			Noon.	65 50 $\frac{1}{2}$	16 45		77	77		Dollond's Quadrant.
				65 51	16 44 $\frac{1}{2}$					Ramfden's ditto.
	14	46 22 $\frac{1}{2}$		18 50 $\frac{1}{2}$	16 44 $\frac{1}{2}$	208 52 $\frac{1}{2}$	79	78	5	At anchor in Owharre
5.	14	49 37		18 10 $\frac{1}{2}$	16 44 $\frac{1}{2}$	208 53 $\frac{1}{2}$	79 $\frac{1}{2}$	78 $\frac{1}{2}$	2	harbour in Huaheine.
	15	0 26		15 24 $\frac{1}{2}$	16 44 $\frac{1}{2}$	208 54	79 $\frac{1}{2}$	78 $\frac{1}{2}$	3	
6.			Noon.	66 35 $\frac{1}{2}$	16 44 $\frac{1}{2}$		77 $\frac{1}{2}$	79		
7.			Noon.	66 52 $\frac{1}{2}$	16 50 $\frac{1}{2}$		79	79 $\frac{1}{2}$		
9.	14	35 10		22 19 $\frac{1}{2}$	16 45 $\frac{1}{2}$	208 24 $\frac{1}{2}$	81	81 $\frac{1}{2}$	4	
10.	12	43 22	2 26 56 $\frac{1}{2}$	47 32 $\frac{1}{2}$	16 45 $\frac{1}{2}$	208 26 $\frac{1}{2}$			5	
12.			Noon.	68 46 $\frac{1}{2}$	16 45 $\frac{1}{2}$				2	At anchor in Ohama-
	14	41 30	4 25 23	21 5 $\frac{1}{2}$	16 45 $\frac{1}{2}$	208 24 $\frac{1}{2}$	78	77 $\frac{1}{2}$	3	nenno harbour in U-
	14	44 33	4 28 31 $\frac{1}{2}$	20 21 $\frac{1}{2}$	16 45 $\frac{1}{2}$	208 26 $\frac{1}{2}$	78	77 $\frac{1}{2}$	3	liatea.
13.			Noon.	69 8 $\frac{1}{2}$	16 45 $\frac{1}{2}$		78	77	2	
	15	12 46	4 56 54 $\frac{1}{2}$	13 48 $\frac{1}{2}$	16 45 $\frac{1}{2}$	208 25 $\frac{1}{2}$	77	76	4	Cloudy.
15.	15	16 56	5 1 31	12 57 $\frac{1}{2}$	16 45 $\frac{1}{2}$	208 26 $\frac{1}{2}$	76 $\frac{1}{2}$	75 $\frac{1}{2}$	5	
17.			Noon.	70 40 $\frac{1}{2}$	16 51 $\frac{1}{2}$		77	78 $\frac{1}{2}$		
	13	44 15 $\frac{1}{2}$	3 26 40	35 22 $\frac{1}{2}$	16 57 $\frac{1}{2}$	207 47 $\frac{1}{2}$	77	77 $\frac{1}{2}$	5	
	5	51 57	19 31 44	21 5 $\frac{1}{2}$	17 10 $\frac{1}{2}$	207 6	77	77	5	
18.			Noon.	70 38	17 17		78	79		
	15	7 34	4 44 37	17 14 $\frac{1}{2}$	17 22	206 24 $\frac{1}{2}$	77 $\frac{1}{2}$	79 $\frac{1}{2}$	6	
	5	24 10 $\frac{1}{2}$	18 59 19	13 29 $\frac{1}{2}$	17 36 $\frac{1}{2}$	205 54 $\frac{1}{2}$	77		5	
19.			Noon.	70 38 $\frac{1}{2}$	17 40 $\frac{1}{2}$		78	79 $\frac{1}{2}$		
	15	25 59 $\frac{1}{2}$	4 58 22 $\frac{1}{2}$	14 4	17 47	205 25 $\frac{1}{2}$	78 $\frac{1}{2}$	79 $\frac{1}{2}$	5	
	15	33 48 $\frac{1}{2}$	5 6 20	12 11 $\frac{1}{2}$	17 47	205 28	78 $\frac{1}{2}$	79 $\frac{1}{2}$	5	
20.			Noon.	70 38 $\frac{1}{2}$	18 3 $\frac{1}{2}$		80	81 $\frac{1}{2}$		Cloudy.
	5	43 42 $\frac{1}{2}$		16 32 $\frac{1}{2}$	18 19	203 58	79	78 $\frac{1}{2}$	5	
21.			Noon.	70 42 $\frac{1}{2}$	18 22 $\frac{1}{2}$		79 $\frac{1}{2}$	81		
	15	10 8	4 36 54	19 17 $\frac{1}{2}$	18 28 $\frac{1}{2}$	203 41	80 $\frac{1}{2}$	80 $\frac{1}{2}$	5	
	15	30 29		14 45	18 29	203 38	80 $\frac{1}{2}$	80 $\frac{1}{2}$	3	Very cloudy.
	15	43 54		11 25 $\frac{1}{2}$	18 29	203 37	80 $\frac{1}{2}$	80 $\frac{1}{2}$	5	Ditto.
	15	55 45	5 22 31	8 34 $\frac{1}{2}$	18 29 $\frac{1}{2}$	203 41	80 $\frac{1}{2}$	80 $\frac{1}{2}$	5	
	5	48 43	19 13 26	17 5	18 36 $\frac{1}{2}$	203 8 $\frac{1}{2}$	77	74 $\frac{1}{2}$	5	
22.			Noon.	70 47 $\frac{1}{2}$	18 41 $\frac{1}{2}$		77 $\frac{1}{2}$	77 $\frac{1}{2}$		
	14	40 22 $\frac{1}{2}$	4 2 10	17 29 $\frac{1}{2}$	18 45 $\frac{1}{2}$	202 23 $\frac{1}{2}$	77	76 $\frac{1}{2}$	3	Very cloudy.
	6	1 46	19 20 11	18 45 $\frac{1}{2}$	19 4 $\frac{1}{2}$	201 31	71	69 $\frac{1}{2}$	3	Ditto.
23.			Noon.	70 44	19 8 $\frac{1}{2}$		74 $\frac{1}{2}$	73		
	5	53 56	19 6 35	15 39 $\frac{1}{2}$	19 22 $\frac{1}{2}$	199 59	74 $\frac{1}{2}$	72 $\frac{1}{2}$	3	Very cloudy.
24.			Noon.	70 47 $\frac{1}{2}$	19 28 $\frac{1}{2}$		75	74		
	14	9 21	3 19 1	37 32 $\frac{1}{2}$	19 32 $\frac{1}{2}$	199 12 $\frac{1}{2}$	75	74 $\frac{1}{2}$	6	
	14	31 12 $\frac{1}{2}$	3 40 46	32 34 $\frac{1}{2}$	19 33 $\frac{1}{2}$	199 11 $\frac{1}{2}$	75	75	3	Cloudy.
	6	20 49 $\frac{1}{2}$	19 25 44	20 14 $\frac{1}{2}$	19 45 $\frac{1}{2}$	198 2 $\frac{1}{2}$	75 $\frac{1}{2}$	72 $\frac{1}{2}$	5	
25.			Noon.	70 47 $\frac{1}{2}$	19 51 $\frac{1}{2}$		74 $\frac{1}{2}$	73 $\frac{1}{2}$		
	13	37 39	2 39 38	46 24 $\frac{1}{2}$	19 55 $\frac{1}{2}$	197 18 $\frac{1}{2}$	75	73 $\frac{1}{2}$	6	

1773.	Time by Watch K.			Apparent Time.	Altitude of the Sun's L. L.	Latitude South.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	M	S	H				A.	B.		
h Sept 25.	13	53	41	2 55 39	42 51 $\frac{1}{2}$	19 55 $\frac{2}{3}$	197 17	75	73 $\frac{1}{2}$	5	
	7	38	57	20 35 38	36 24 $\frac{3}{4}$	20 20 $\frac{1}{2}$	195 56 $\frac{1}{4}$	73 $\frac{1}{2}$	71 $\frac{1}{2}$	5	
o — 26.				Noon.	70 37 $\frac{3}{4}$	20 25 $\frac{1}{3}$		73 $\frac{1}{2}$	73		
	16	3	23 $\frac{1}{2}$	4 56 44	15 7 $\frac{3}{4}$	20 30	195 5	72 $\frac{1}{4}$	71	5	
	6	9	22	18 59 38	14 21 $\frac{1}{4}$	20 35	194 15 $\frac{1}{2}$	71 $\frac{1}{2}$	71 $\frac{1}{4}$	5	
D — 27.				Noon.	70 46 $\frac{1}{2}$	20 40 $\frac{1}{10}$		71 $\frac{1}{2}$	71		
	15	16	8 $\frac{1}{2}$	4 2 46 $\frac{1}{2}$	27 44 $\frac{2}{3}$	20 44 $\frac{2}{3}$	193 21 $\frac{3}{8}$	72	70	5	Very cloudy.
	6	8	58 $\frac{1}{2}$	18 48 45	11 56 $\frac{3}{4}$	20 57 $\frac{4}{5}$	191 37 $\frac{1}{8}$	72	71	4	
	6	34	30 $\frac{1}{2}$		17 45 $\frac{1}{3}$	20 58 $\frac{2}{3}$	191 33 $\frac{3}{8}$			5	
δ — 28.				Noon.	70 46 $\frac{1}{2}$	21 3 $\frac{2}{3}$		72 $\frac{3}{4}$	72 $\frac{1}{2}$		
	9	33	39	22 6 44	56 18 $\frac{2}{3}$	21 27 $\frac{2}{3}$	189 53 $\frac{5}{8}$	72 $\frac{1}{2}$	73	5	
ξ — 29.				Noon.	70 43 $\frac{1}{2}$	21 30 $\frac{1}{4}$		72 $\frac{1}{4}$	72 $\frac{1}{2}$		
	13	44	3	2 15 37	51 45 $\frac{3}{8}$	21 28 $\frac{2}{3}$	189 30 $\frac{1}{8}$			5	
	6	25	53		12 48 $\frac{1}{8}$	21 14 $\frac{1}{2}$	187 56	73	70	4	
u — 30.				Noon.	71 26	21 11 $\frac{1}{4}$		71	70		
	14	42	40	3 4 48	41 18 $\frac{1}{4}$	21 13 $\frac{1}{3}$	187 6 $\frac{3}{8}$	71	70	4	Very hazy.
	7	35	59	19 54 20	27 31 $\frac{4}{5}$	21 20 $\frac{5}{6}$	186 7 $\frac{3}{4}$	69	67	5	Cloudy.
♀ Oct. 1.				Noon.	71 38 $\frac{1}{4}$	21 21 $\frac{7}{8}$		70 $\frac{1}{4}$	70		
	16	11	21	4 26 40	22 43 $\frac{9}{10}$	21 24 $\frac{5}{8}$	185 21	70	69	5	
h — 2.				Noon.	72 3 $\frac{3}{4}$	21 20 $\frac{1}{2}$		70 $\frac{1}{2}$	71 $\frac{1}{2}$		In English Road,
	14	29	55		46 19 $\frac{1}{4}$	21 20 $\frac{1}{2}$	184 55 $\frac{1}{4}$	71	74	5	Eaoowe.
	8	15	17	20 28 43	35 44 $\frac{1}{2}$	21 16 $\frac{1}{4}$	184 49 $\frac{7}{8}$	71	71 $\frac{1}{2}$	5	
D — 4.				Noon.	73 6 $\frac{1}{4}$	21 4 $\frac{1}{4}$		71	71 $\frac{2}{3}$		
	13	59	49	2 12 22	53 37 $\frac{2}{3}$	21 4 $\frac{1}{4}$	184 32 $\frac{1}{12}$	72 $\frac{1}{4}$	72	3	Cloudy.
δ — 5.				Noon.	73 52 $\frac{3}{4}$	21 4 $\frac{1}{8}$	Dollond's Q.	71 $\frac{1}{4}$	74 $\frac{1}{4}$		
					73 52 $\frac{7}{8}$	21 4 $\frac{5}{8}$	Ramfden's.				
	10	29	9 $\frac{1}{2}$	22 41 56	65 3 $\frac{1}{10}$	21 4 $\frac{1}{4}$	184 32 $\frac{1}{6}$	72 $\frac{1}{2}$	74 $\frac{3}{4}$	6	In Van Diemen's
ξ — 6.				Noon.	73 52 $\frac{3}{4}$	21 4	Dollond's Q.	72 $\frac{3}{4}$	75 $\frac{1}{4}$		Road at Tongatabu.
					73 52 $\frac{7}{8}$	21 4 $\frac{1}{10}$	Ramfden's.				
	15	14	44 $\frac{1}{2}$	3 27 27	37 9 $\frac{2}{3}$	21 4 $\frac{1}{4}$	184 30 $\frac{3}{4}$	72 $\frac{3}{4}$	72 $\frac{1}{2}$	8	Very cloudy.
	10	31	44	22 44 38	65 48 $\frac{1}{2}$	21 4 $\frac{1}{4}$	184 31 $\frac{7}{8}$	72 $\frac{1}{2}$	72 $\frac{1}{2}$	6	
u — 7.				Noon.	74 14 $\frac{3}{4}$	21 4 $\frac{1}{4}$		72 $\frac{3}{4}$	73		
	15	36	24	3 49 7 $\frac{1}{2}$	32 18 $\frac{1}{5}$	21 4 $\frac{1}{6}$	184 28 $\frac{7}{8}$	72	72 $\frac{3}{4}$	5	The Road E. 2 miles.
	8	59	0 $\frac{1}{2}$	21 10 12	45 46 $\frac{1}{4}$	22 1 $\frac{1}{3}$	184 4 $\frac{3}{8}$	73	73 $\frac{1}{2}$	5	
	9	22	18 $\frac{1}{2}$	21 33 35	50 57 $\frac{1}{10}$	22 1 $\frac{1}{3}$	184 5 $\frac{1}{2}$	73	73 $\frac{1}{2}$	6	
♀ — 8.				Noon.	73 38 $\frac{1}{2}$	22 4 $\frac{1}{6}$		75	76 $\frac{1}{4}$		
	16	57	42	5 9 29	73 47 $\frac{2}{3}$	22 6 $\frac{1}{4}$	184 12 $\frac{1}{2}$	76 $\frac{1}{2}$	75	5	
	8	46	6 $\frac{1}{2}$		43 25 $\frac{1}{2}$	22 23 $\frac{2}{3}$	184 47 $\frac{3}{8}$	72 $\frac{1}{4}$	70 $\frac{1}{2}$	4	
h — 9.				Noon.	73 37 $\frac{1}{4}$	22 28		73 $\frac{3}{4}$	73 $\frac{1}{4}$		
	7	43	36 $\frac{1}{2}$	19 53 53	28 36 $\frac{1}{2}$	22 36 $\frac{2}{3}$	183 47 $\frac{1}{4}$	74	70	6	
o — 10.				Noon.	73 43 $\frac{1}{4}$	22 45 $\frac{2}{3}$		70 $\frac{3}{4}$	69 $\frac{3}{4}$		
	16	1	10	4 9 11	27 55	22 56 $\frac{1}{2}$	183 12 $\frac{3}{4}$	71	70	4	
	8	42	31 $\frac{1}{2}$		40 38 $\frac{1}{4}$	23 40		69	69	4	
	9	31	36	21 36 10	51 30 $\frac{1}{3}$	23 42 $\frac{1}{2}$	182 19 $\frac{1}{4}$	69	69	6	
	9	31	36		51 30 $\frac{1}{3}$					6	
D — 11	12	25	56 $\frac{1}{2}$		71 32	23 51 $\frac{3}{5}$	Ship's Course S. by W. 4 miles an h.			4	

1773.	Time by Watch K.			Apparent Time.	Altitude of the ☉'s L. L.		Latitude South.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.		
	H	'	"	H	'	"	°	'	A.	B.				
☽ Oct. 11.	15	51	38 $\frac{1}{2}$	3	54	54	31	12 $\frac{7}{8}$	24	6 $\frac{1}{3}$	182 0	70 $\frac{1}{4}$ 69 $\frac{1}{4}$	4	
	7	42	10				26	14 $\frac{1}{3}$	25	17 $\frac{1}{3}$	181 26 $\frac{1}{4}$	69 $\frac{1}{4}$ 69 $\frac{1}{2}$	5	
	8	2	43	20	3	31	30	50 $\frac{1}{6}$	25	18 $\frac{1}{2}$	181 23 $\frac{1}{2}$	69 $\frac{1}{4}$ 69 $\frac{1}{2}$	6	
♂ — 12.				Noon.			71	38	25	26 $\frac{1}{2}$		72 70 $\frac{1}{4}$		
	16	34	31	4	34	21	22	19 $\frac{1}{3}$	25	54	181 7	71 70 $\frac{1}{4}$	5	
	8	41	53	20	39	30	38	41 $\frac{2}{3}$	26	55	180 32 $\frac{1}{4}$	69 68 $\frac{1}{2}$	5	
♀ — 13.				Noon.			70	24	27	13 $\frac{2}{3}$		70 $\frac{1}{4}$ 70		
	7	2	41	18	57	38 $\frac{1}{2}$	16	20 $\frac{2}{3}$	28	27	179 51 $\frac{1}{2}$	68 $\frac{1}{4}$ 66 $\frac{1}{4}$	8	
	7	7	54	19	2	54 $\frac{1}{2}$	17	29 $\frac{2}{3}$	28	27	179 53 $\frac{1}{4}$	68 $\frac{1}{4}$ 66 $\frac{1}{4}$	5	
♂ — 14.	6	35	45 $\frac{1}{2}$	18	29	20	10	24 $\frac{7}{8}$	29	47	179 30 $\frac{1}{4}$	68 65	5	
♀ — 15.				Noon.			68	5 $\frac{1}{2}$	30	16		71 $\frac{1}{2}$ 68 $\frac{3}{4}$		
	15	26	28 $\frac{1}{2}$	3	20	7	38	24 $\frac{1}{2}$	30	32	179 30 $\frac{7}{8}$	71 70	5	
	6	39	25 $\frac{1}{2}$	18	32	56	11	27 $\frac{1}{4}$	31	16 $\frac{4}{5}$	179 28 $\frac{1}{4}$	67 $\frac{1}{4}$ 65	6	
♂ — 16.				Noon.			67	2 $\frac{1}{4}$	31	41 $\frac{1}{3}$		69 $\frac{1}{4}$ 68		
	17	15	15	5	8	42	15	29 $\frac{2}{3}$	32	0 $\frac{1}{10}$	179 27 $\frac{1}{4}$	68 $\frac{1}{2}$ 67	5	
	9	4	10	20	57	40	41	46 $\frac{1}{10}$	32	37	179 27 $\frac{1}{8}$	66 $\frac{1}{2}$ 66 $\frac{1}{4}$	5	
☉ — 17.				Noon.			66	24 $\frac{1}{4}$	32	41 $\frac{1}{3}$		69 $\frac{1}{4}$ 69		
	17	35	52 $\frac{1}{2}$	5	29	18 $\frac{1}{2}$	11	21 $\frac{1}{3}$	32	51 $\frac{1}{2}$	179 26	68 66		
	6	42	41	18	37	16	12	51 $\frac{1}{4}$	33	24	179 42 $\frac{1}{4}$	66 $\frac{1}{4}$ 64	6	
☽ — 18.				Noon.			65	41 $\frac{1}{4}$	33	46 $\frac{2}{3}$		69 $\frac{1}{2}$ 66		
	8	5	10				29	53 $\frac{1}{2}$	35	40		66 $\frac{1}{4}$ 64 $\frac{1}{2}$	2	Cloudy.
♂ — 19.				Noon.			63	52	35	58		68 $\frac{1}{2}$ 66 $\frac{3}{4}$		Ditto.
	7	3	34				17	32 $\frac{3}{8}$	37	27	179 38 $\frac{1}{4}$	64 $\frac{1}{2}$ 61 $\frac{1}{2}$	5	
♀ — 20.				Noon.			62	23 $\frac{1}{4}$	37	47 $\frac{1}{4}$		64 60 $\frac{1}{2}$		
	14	49	27	2	42	51 $\frac{1}{2}$	44	9 $\frac{1}{2}$	37	58 $\frac{4}{5}$	179 23	65 61 $\frac{1}{2}$	6	
	6	48	51 $\frac{1}{2}$	18	39	54 $\frac{1}{2}$	14	14 $\frac{1}{4}$	38	54 $\frac{1}{2}$	178 48 $\frac{1}{4}$	62 59 $\frac{1}{2}$	6	
♂ — 21.				Noon.			61	27	39	6		63 $\frac{1}{2}$ 62		
	14	48	52	2	37	5 $\frac{1}{2}$	44	51 $\frac{1}{8}$	39	10 $\frac{1}{4}$	178 4 $\frac{1}{8}$	64 $\frac{1}{4}$ 63 $\frac{1}{3}$	6	Portland S. by W.
	8	52	52 $\frac{1}{2}$	20	35	30 $\frac{1}{2}$	36	18 $\frac{1}{8}$	40	5 $\frac{4}{5}$	176 42	61 $\frac{1}{2}$ 58	6	$\frac{1}{2}$ N. 2 or 3 leagues.
♀ — 22.				Noon.			60	40 $\frac{1}{2}$	40	14		62 $\frac{1}{2}$ 59 $\frac{1}{2}$		Black-Head S. W.
	15	32	15	3	14	55 $\frac{1}{2}$	37	58 $\frac{1}{8}$	40	25 $\frac{1}{3}$	176 43	63 $\frac{1}{4}$ 60 $\frac{3}{4}$	5	2 or 3 leagues.
♂ — 23.				Noon.			60	47 $\frac{1}{4}$	40	28 $\frac{1}{2}$		58 53 $\frac{3}{4}$		Cape Turnagain S.
	15	50	33 $\frac{1}{2}$	3	33	13 $\frac{1}{2}$	34	54 $\frac{1}{3}$	40	28 $\frac{2}{3}$	176 43	61 58	6	W. b. W. about 4 le.
	8	26	39	20	7	57	31	23 $\frac{2}{3}$	41	27 $\frac{2}{3}$	176 24	60 57 $\frac{1}{4}$	5	Cape Turnagain W.
☉ — 24.	17	33	46	5	13	38 $\frac{1}{2}$	16	19 $\frac{3}{5}$	41	57	176 1 $\frac{3}{4}$	62 $\frac{1}{2}$ 62	6	$\frac{1}{4}$ S. about 2 leag.
☽ — 25.				Noon.			59	34 $\frac{1}{2}$	42	23		62 59 $\frac{3}{4}$		
	7	45	47	19	23	17	23	28	42	50 $\frac{1}{2}$	175 27	59 $\frac{1}{4}$ 54 $\frac{1}{4}$	5	
	11	46	5				58	42 $\frac{1}{5}$			{ ☉ N. Ship's course			
											{ N. W. by N. 6			
											{ miles an hour.			
♂ — 26.				Noon.			59	51 $\frac{1}{3}$	42	27				
	13	46	2 $\frac{1}{2}$				58	11 $\frac{1}{8}$			☉ N. 26° W.		4	

1773.	Time by Watch K.			Apparent Time.		Altitude of the ☉'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	'	"	H	'				A.	B.		
♂ Oct. 26.	17	53	20	5	29	22	13 53	42 0 $\frac{1}{2}$	175 4 $\frac{1}{2}$	57 $\frac{1}{2}$ 53	4	{ Cape Palliser N. $\frac{3}{4}$ W. about 8 leagues dist.
♀ — 27.				Noon.			61 3:	41 35 $\frac{1}{2}$		57 $\frac{1}{2}$ 58		{ Cape Palliser W. by S. about 5 leagues.
	17	14	41	4	50	43 $\frac{1}{2}$	21 15 $\frac{3}{8}$	41 47 $\frac{1}{2}$	175 4 $\frac{1}{2}$	60 $\frac{3}{4}$ 57 $\frac{1}{2}$	4	{ Cape Palliser N. W. about 4 leagues: hazy, & high sea.
♂ — 28.	8	9	58	19	47	39	28 27 $\frac{9}{10}$	42 3 $\frac{1}{2}$	175 31 $\frac{3}{4}$	57 $\frac{1}{2}$ 56	5	Hazy, and a high sea.
				Noon.			60 42 $\frac{1}{2}$	42 16 $\frac{1}{3}$		59 $\frac{1}{2}$ 58		
	16	51	34 $\frac{1}{2}$	4	28	37	25 31 $\frac{2}{3}$	42 20 $\frac{1}{3}$	175 22 $\frac{3}{8}$	61 $\frac{3}{4}$ 56 $\frac{1}{2}$	5	
	10	23	53	22	2	49	51 45 $\frac{1}{10}$	41 49 $\frac{5}{8}$	175 51 $\frac{5}{8}$	57 52 $\frac{1}{2}$	5	{ Cape Palliser W. $\frac{1}{2}$ N. about 10 leagues.
♀ — 29.				Noon.			61 33 $\frac{1}{2}$	41 45 $\frac{2}{3}$		57 $\frac{1}{2}$ 52 $\frac{1}{2}$		{ Cape Palliser W. $\frac{1}{4}$ N. about 8 leagues off.
	17	28	56	5	6	25	18 46 $\frac{1}{8}$	41 42 $\frac{1}{3}$	175 30 $\frac{1}{8}$	58 53	6	{ Cape Palliser W. about 5 leagues off.
♂ — 30.				Noon.			61 25:	42 13 $\frac{1}{2}$		59 58 $\frac{1}{2}$		Very hazy, and a great sea.
○ — 31.				Noon.			61 40:	42 19		60 $\frac{1}{2}$ 57		Ditto.
♂ Nov. 1.	9	18	47	20	51	41 $\frac{1}{2}$	41 14 $\frac{9}{10}$		174 28	55 $\frac{3}{4}$ 53	6	{ Cape Palliser E. $\frac{1}{4}$ N. about 6 leagues dist.
♂ — 2.	We anchored in Q. Charlotte's Sound, after beating off the Mouth of Cook's Straits, for a fortnight, in one of the heaviest gales of wind almost ever known. I got up my Clock and Instruments as soon as possible, and compared the Watch K. with the Clock every day, from the 6th to the 22d, (See p. 65.) and found that the Watch was then gaining 9', 09" a day on mean time, and that it was too slow for mean time, at Queen Charlotte's Sound, by 11 h. 14' 4", 7 on the 6th at noon. Hence, allowing the rate at which it went at Point Venus, it will make the difference of Longitude, between that place and the Sound, 36° 26' 29"; that is, it makes the Sound 173° 58' 41$\frac{1}{2}$" East of Greenwich. Allowing its Greenwich rate all the way from Drake's Island, it will place the Sound 171° 36' 25" to the East of Drake's Island, or 167° 20' 17$\frac{1}{2}$" East of Greenwich. Lastly, it was 11 h. 38' 17", 97 too slow for mean time, at this place, June 3, at noon, and gained then at the rate of 9", 05 a day: consequently it should have been 11 h. 14' 46", 17 too slow on November 6, at noon; but as I found it only 11 h. 14' 4", 7, it is manifest that the Watch has erred from its true rate 41", 5 in the interval between these two times. In computing the following Longitudes of the ship, I assumed the Watch's rate of going as above-mentioned, that it was 11 h. 11' 42", 3 too slow for mean time at Queen Charlotte's Sound, on the 22d, at noon, and that the true Longitude of the Observatory was 174° 17' 4$\frac{1}{2}$" East of Greenwich, which is what my Observations, made there this time, gave it.											
♂ — 25	7	59	12	19	27	8	29 36 $\frac{1}{2}$		175 22 $\frac{3}{4}$	64 61	5	{ Cape Palliser W. N. W. W. 3 or 4 leagues off.
♀ — 26.				Noon.			68 56:	41 52		64 $\frac{3}{4}$ 63 $\frac{1}{2}$		Very hazy.
	7	50	21	19	19	16	28 20 $\frac{2}{3}$	43 0 $\frac{1}{3}$	175 45 $\frac{3}{4}$	64 $\frac{1}{4}$ 63 $\frac{1}{2}$	5	Ditto.

ON BOARD THE RESOLUTION.

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1773.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.		Latitude S.	Longitude East by K.	Thermom.		No of Obs.	Remarks.
	H	M		°	'			A.	B.		
h Nov. 27.			Noon.	67	32 $\frac{1}{2}$	43 26 $\frac{3}{5}$		62	62		
	17	11 38 $\frac{1}{2}$	4 41 46	28	14	43 50 $\frac{1}{3}$	176 5 $\frac{3}{8}$	63 $\frac{1}{2}$	61	5	
D — 29.	7	48 48	19 20 10	28	40 $\frac{1}{8}$	44 18 $\frac{1}{3}$	176 29	62	54	5	
			Noon.	66	44	44 36 $\frac{1}{4}$		64 $\frac{1}{2}$	55		
	17	12 31	4 45 50	27	47 $\frac{1}{3}$	44 50	177 8 $\frac{3}{4}$	64	54 $\frac{1}{2}$	5	
δ — 30.	7	51 24 $\frac{1}{2}$	19 28 3	30	19 $\frac{1}{8}$	45 34 $\frac{1}{2}$	178 3 $\frac{1}{4}$	56 $\frac{1}{2}$	48	5	
			Noon.	65	40 $\frac{1}{4}$	45 49 $\frac{1}{3}$		59	49		
	17	34 9 $\frac{1}{2}$	5 12 44	23	19 $\frac{1}{3}$	46 3 $\frac{1}{3}$	178 35 $\frac{1}{4}$	60	49	5	Very cloudy.
	7	54 25 $\frac{1}{2}$	19 35 37	31	43 $\frac{1}{3}$	46 54	179 10 $\frac{1}{2}$	56	48	5	Very hazy.
g Dec. 1.			Noon.	64	35 $\frac{1}{2}$	47 4 $\frac{1}{2}$		59	49 $\frac{1}{2}$		Very cloudy.
u — 2.			Noon.	63	26 $\frac{1}{2}$	48 21 $\frac{7}{8}$		57	46 $\frac{1}{2}$		Ditto.
q — 3.			Noon.	63	0 $\frac{1}{2}$	48 56 $\frac{1}{2}$		56 $\frac{1}{2}$	47		Hazy.
h — 4.	5	44 32	17 26 1	11	39 $\frac{1}{3}$	50 4 $\frac{1}{3}$	179 57 $\frac{1}{4}$	54	45	5	
o — 5.			Noon.	61	59	50 14 $\frac{3}{4}$		62 $\frac{3}{4}$	46 $\frac{1}{2}$		
	17	48 50 $\frac{1}{2}$	5 28 49	21	47 $\frac{2}{3}$	50 18 $\frac{1}{3}$	179 37 $\frac{3}{8}$	63 $\frac{1}{2}$	46 $\frac{1}{2}$	6	
D — 6.	8	7 49	19 47 0	33	51 $\frac{1}{3}$	50 38 $\frac{1}{2}$	179 33 $\frac{1}{8}$	57 $\frac{1}{2}$	47 $\frac{1}{2}$	6	
			Noon.	61	26 $\frac{1}{2}$	50 54 $\frac{1}{2}$		65	49		Very cloudy.
	10	38 26	22 19 18	54	0 $\frac{1}{3}$	52 53	180 5 $\frac{3}{8}$			6	
δ — 7			Noon.	59	20 $\frac{1}{4}$	53 7 $\frac{1}{3}$		63 $\frac{1}{2}$	49		
	16	15 15 $\frac{1}{2}$	3 57 40	35	53 $\frac{3}{4}$	53 35 $\frac{1}{3}$	180 31	60	48 $\frac{3}{4}$	6	
	7	24 47	19 9 16	28	7 $\frac{1}{3}$	55 11 $\frac{1}{2}$	181 7 $\frac{3}{4}$	49	50	6	Cloudy.
	9	23 50	21 7 51	44	22 $\frac{1}{8}$	55 18 $\frac{1}{3}$	181 1 $\frac{1}{2}$	54	45	6	Flying clouds.
g — 8.			Noon.	56	54 $\frac{3}{4}$	55 39 $\frac{1}{3}$		57 $\frac{1}{2}$	43 $\frac{1}{4}$		
	16	29 53	4 16 22	32	56 $\frac{1}{2}$	56 4 $\frac{3}{4}$	181 41	61	43	6	
	9	42 23	21 29 21	45	40 $\frac{1}{3}$	57 44 $\frac{5}{8}$	181 54 $\frac{3}{4}$	55	45	6	
	10	14 5		48	52 $\frac{1}{3}$	58 6 $\frac{1}{4}$	{ Ship's course S. S. E. 6 $\frac{3}{4}$ miles an hour.			6	Hazy.
u — 9.	12	54 39 $\frac{1}{2}$		53	43 $\frac{1}{2}$	58 22 $\frac{1}{4}$				6	
	16	23 25 $\frac{1}{2}$		33	12 $\frac{5}{8}$	58 22 $\frac{1}{4}$	182 21 $\frac{3}{4}$	62 $\frac{1}{2}$	43 $\frac{1}{2}$	3	
q — 10.	9	52 46	21 57 25	46	43 $\frac{1}{8}$	60 31	186 38 $\frac{1}{4}$	52 $\frac{1}{2}$	39 $\frac{1}{2}$	6	Cloudy.
h — 11.			Noon.	52	6	60 44 $\frac{3}{4}$		57 $\frac{1}{2}$	39 $\frac{3}{4}$		
	16	11 26	4 18 26	31	59 $\frac{1}{3}$	61 11 $\frac{2}{3}$	187 23 $\frac{3}{4}$	56 $\frac{1}{2}$	39 $\frac{1}{3}$	6	
o — 12.			Noon.	50	9 $\frac{1}{4}$	62 46 $\frac{1}{2}$		54	32 $\frac{1}{4}$		
	16	25 55	4 44 57	28	47	63 4	190 26 $\frac{1}{4}$	59	35	6	Very cloudy.
	18	52 25 $\frac{1}{2}$	7 13 24 $\frac{1}{2}$	12	34 $\frac{2}{5}$	63 10 $\frac{2}{5}$	190 56 $\frac{1}{4}$				
D — 13.	7	5 36 $\frac{1}{2}$	19 44 52	31	51 $\frac{1}{2}$	64 38 $\frac{5}{8}$	195 45 $\frac{3}{4}$	42	31 $\frac{3}{4}$	6	
δ — 14.			Noon.	48	8 $\frac{1}{4}$	64 55 $\frac{5}{8}$		51 $\frac{3}{4}$	34 $\frac{1}{4}$		
	15	50 45	4 36 54 $\frac{1}{2}$	29	30	65 12 $\frac{1}{2}$	197 32	51	35	6	
u — 16.			Noon.	48	54 $\frac{1}{2}$	64 15 $\frac{3}{4}$		52	33		A great fei.
q — 17.	11	23 57 $\frac{1}{2}$		48	10 $\frac{1}{2}$	{ 64 35 Lying too, Ship's Head N. Eastward.	{ 204 59 $\frac{1}{4}$ 211 24	56	33	6	
	12	58 41 $\frac{1}{2}$		43	24 $\frac{3}{8}$			57 $\frac{1}{2}$	34	6	
	15	35 11 $\frac{1}{2}$		28	23 $\frac{1}{2}$					6	
o — 19.			Noon.	48	27 $\frac{1}{3}$	64 47 $\frac{1}{3}$					
	14	49 36		30	38 $\frac{1}{6}$	64 49 $\frac{1}{3}$	211 24			6	
D — 20.			Noon.	47	18	65 58		55	33		Very foggy.
δ — 21			Noon.	46	29 $\frac{1}{2}$	66 48		55	34		Very good.
g — 22.			Noon.	45	50	67 26 $\frac{2}{3}$		50	33		

1773.	Time by Watch K.			Apparent Time.	Altitude of the ☉'s L. L.			Latitude S.	Longitude East by K.		Thermom.		No. of Obs.	Remarks.
	H	'	"	H	'	"	'		'	"	A.	B.		
☿ Dec. 22.	5	54	42	20 11 26	33	51 $\frac{3}{4}$	67	13 $\frac{1}{2}$	221	34	41	31 $\frac{1}{4}$	6	Cloudy.
♄ — 23.				Noon.	46	4	67	12 $\frac{1}{4}$			53	35		
♀ — 24.	14	46	55 $\frac{1}{2}$	5 8 42	26	15 $\frac{1}{4}$	67	5	223	4	53	33	6	
	16	9	43	6 33 2	18	11 $\frac{9}{10}$	67	3	223	26 $\frac{1}{2}$	55	33	10	
♂ — 25.				Noon.	46	52 $\frac{1}{2}$	66	21 $\frac{1}{2}$			50	34		
☉ — 26.				Noon.	46	57 $\frac{1}{2}$	66	14 $\frac{1}{2}$			56	37		
	14	52	4 $\frac{1}{2}$	5 24 29 $\frac{1}{2}$	24	4 $\frac{3}{4}$	66	6	226	1 $\frac{1}{4}$	58	35	6	
	5	17	54 $\frac{1}{2}$	19 52 11	32	23 $\frac{3}{4}$	65	51 $\frac{1}{3}$	226	35 $\frac{7}{8}$	47	36	5	
♂ — 27.				Noon.	47	16 $\frac{2}{3}$	65	53 $\frac{1}{3}$			53	35		
	14	12	54 $\frac{1}{2}$	4 46 57	28	28 $\frac{1}{4}$	65	46 $\frac{1}{4}$	226	35 $\frac{3}{8}$	52 $\frac{3}{4}$	34	6	
☿ — 29.	14	41	10 $\frac{1}{2}$	5 9 29	26	6 $\frac{1}{4}$	62	10	225	29 $\frac{1}{4}$		34 $\frac{1}{2}$	6	W. W. Mr. Gilpin.
♄ — 30.	4	55	27 $\frac{1}{2}$	19 17 59	29	24 $\frac{3}{4}$	59	56	224	47 $\frac{3}{8}$	47	33	6	
♀ — 31.				Noon.	53	15 $\frac{3}{4}$	59	40			54	35 $\frac{1}{2}$		
	15	16	36	5 39 23	22	11 $\frac{1}{4}$	59	38	224	58 $\frac{1}{4}$	63	35	6	
	5	54	19 $\frac{1}{2}$	21 14 40	43	21 $\frac{1}{4}$	59	17 $\frac{1}{2}$	223	54 $\frac{7}{8}$	50 $\frac{1}{2}$	34 $\frac{3}{4}$	6	
1774.														
♂ Jan. 1.				Noon.	53	39 $\frac{3}{8}$	59	11 $\frac{1}{2}$			61 $\frac{1}{2}$	36 $\frac{1}{2}$		
					53	39 $\frac{1}{2}$	59	11 $\frac{1}{3}$						
	15	54	33	6 13 10	17	43 $\frac{5}{8}$	58	48	223	32 $\frac{3}{4}$	59 $\frac{1}{4}$	37 $\frac{1}{4}$	6	
	3	22	16	17 38 47	16	31 $\frac{3}{5}$	58	4	223	5 $\frac{1}{2}$	51 $\frac{1}{2}$	34 $\frac{1}{4}$	6	
☉ — 2.				Noon.	54	47 $\frac{3}{4}$	57	58 $\frac{1}{10}$			61	38 $\frac{1}{4}$		
	8	4	37 $\frac{1}{2}$	22 10 23	50	20 $\frac{1}{12}$	56	52 $\frac{1}{2}$					6	
♂ — 3.				Noon.	55	54	56	46 $\frac{1}{5}$			55	36		
	14	13	55	4 17 36	32	45 $\frac{1}{6}$	56	27	220	6 $\frac{5}{8}$	61 $\frac{1}{2}$	39	6	
♂ — 4.				Noon.	57	39 $\frac{1}{2}$	54	55 $\frac{1}{4}$			59 $\frac{1}{4}$	46 $\frac{1}{4}$		
	6	9	56	20 21 42	38	38 $\frac{1}{3}$	53	57	222	5	51 $\frac{1}{2}$	47	5	
☿ — 5.				Noon.	58	44	53	43 $\frac{3}{5}$			55 $\frac{1}{4}$	46 $\frac{3}{4}$		
	6	11	9	20 29 32	40	3 $\frac{5}{6}$	52	23	224	11 $\frac{1}{2}$	50 $\frac{3}{4}$	46	6	
♄ — 6.				Noon.	60	21	51	59 $\frac{1}{4}$			55 $\frac{1}{3}$	47		
	14	34	28 $\frac{1}{2}$	4 55 18	27	12 $\frac{1}{12}$	51	42 $\frac{1}{4}$	224	50 $\frac{1}{4}$	55	50	6	
	5	27	1 $\frac{1}{2}$	19 53 10 $\frac{2}{3}$	34	45 $\frac{3}{4}$	50	47	226	16	52 $\frac{1}{2}$	47 $\frac{1}{4}$	6	
	6	17	7	20 43 27	42	30 $\frac{2}{3}$	50	45 $\frac{1}{3}$	226	18 $\frac{1}{4}$			6	
♀ — 7.				Noon.	61	37	50	36 $\frac{2}{5}$			61 $\frac{1}{3}$	50		
	14	28	15	4 57 48	26	39 $\frac{7}{8}$	50	19 $\frac{1}{2}$	226	55 $\frac{1}{2}$	66 $\frac{1}{3}$	50 $\frac{1}{4}$	6	
	6	13	55	20 48 47	43	40 $\frac{1}{3}$	49	19 $\frac{2}{3}$	228	36	56	47 $\frac{1}{4}$	6	
	6	29	19	21 4 14	46	2 $\frac{1}{4}$	49	19	228	36 $\frac{1}{2}$			6	
	6	59	11	21 34 16	50	27 $\frac{1}{6}$	49	17	228	39 $\frac{1}{4}$			6	
♂ — 8.				Noon.	62	58	49	7 $\frac{3}{5}$			61 $\frac{3}{4}$	49 $\frac{1}{4}$		By W. W. By Mr. Gilpin. Cloudy.
					62	57 $\frac{1}{2}$	49	8 $\frac{1}{10}$						
	14	15	38	4 54 47	26	58 $\frac{3}{4}$	48	59 $\frac{2}{3}$	229	43	65 $\frac{3}{4}$	50	3	
☉ — 9.	5	5	7 $\frac{1}{2}$	19 52 56	34	49 $\frac{1}{2}$	48	25 $\frac{5}{6}$	231	58 $\frac{1}{4}$	54	49	6	Cloudy.
				Noon.	63	40 $\frac{1}{2}$	48	17			61	51 $\frac{1}{3}$		
	4	23	22	19 22 4	29	34 $\frac{1}{2}$	48	8 $\frac{1}{2}$	234	50 $\frac{1}{8}$	57	49 $\frac{1}{2}$	4	
♄ — 10.				Noon.	63	41	48	7 $\frac{4}{5}$			64	52 $\frac{1}{2}$		
	4	17	6 $\frac{1}{2}$	19 23 31	29	42 $\frac{2}{3}$	47	50 $\frac{1}{4}$	236	54	54 $\frac{1}{2}$	48 $\frac{3}{4}$	6	
♂ — 11.				Noon.	63	48 $\frac{1}{4}$	47	51 $\frac{1}{2}$			62	50		

ON BOARD THE RESOLUTION.

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1774.	Time by Watch K.			Apparent Time.	Altitude of the ☉'s L. L.		Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	"	"	H	"	"			A.	B.		
♂ Jan. 11.	14	41	49	5 53 23	17	1 $\frac{1}{8}$	48 19 $\frac{1}{4}$	238 16 $\frac{1}{2}$	65	50	6	
	4	8	17 $\frac{1}{2}$	19 24 51	29	49 $\frac{1}{2}$	49 13 $\frac{1}{4}$	239 34 $\frac{3}{4}$	57	53	6	
♀ — 12.				Noon.	61	56 $\frac{1}{4}$	49 34		63 $\frac{1}{2}$	56		
	13	58	50	5 18 33	22	50 $\frac{3}{8}$	50 0 $\frac{1}{4}$	240 24 $\frac{3}{4}$	65	55	6	
♂ — 13.				Noon.	59	19:	52 1 $\frac{1}{2}$		63 $\frac{1}{4}$	53 $\frac{1}{2}$		Foggy.
♀ — 14.				Noon.	57	15:	53 55 $\frac{1}{2}$		63 $\frac{1}{4}$	51 $\frac{1}{4}$		Ditto.
	13	24	11 $\frac{1}{2}$	4 39 49 $\frac{1}{2}$	28	36 $\frac{1}{2}$	54 27	239 39 $\frac{1}{2}$	64 $\frac{1}{2}$	54 $\frac{1}{2}$	6	Ditto.
♂ — 15.	4	49	6	20 6 23 $\frac{1}{2}$	34	38 $\frac{1}{4}$	55 59 $\frac{2}{3}$	240 17	55	48	6	A great sea.
☉ — 16.				Noon.	54	30:	56 18 $\frac{1}{3}$		61 $\frac{1}{4}$	47 $\frac{3}{4}$		Ditto, and hazy.
	14	18	45	5 37 39	20	16 $\frac{1}{4}$	56 50 $\frac{1}{3}$	240 44	63 $\frac{1}{4}$	49	6	
	4	17	58 $\frac{1}{2}$		30	22 $\frac{1}{4}$	58 7	241 16 $\frac{1}{8}$	52	43 $\frac{1}{2}$	6	
♂ — 17.				Noon.	52	3:	58 34		60 $\frac{1}{4}$	41 $\frac{1}{2}$		Foggy.
	12	52	8		30	53 $\frac{1}{2}$	58 58 $\frac{1}{4}$	241 57 $\frac{1}{2}$	58 $\frac{2}{3}$	41	6	
♂ — 18.	13	3	46	4 32 1	28	18 $\frac{2}{3}$	61 6	243 18 $\frac{1}{2}$	56 $\frac{1}{2}$	41 $\frac{1}{2}$	6	
♀ — 19.	2	18	54 $\frac{1}{2}$	17 48 49	16	26 $\frac{5}{8}$	62 28	243 53 $\frac{3}{4}$	51	47 $\frac{1}{2}$	6	
♂ — 20.				Noon.	47	25 $\frac{1}{2}$	62 34 $\frac{1}{2}$		60	40		
	12	53	59 $\frac{1}{2}$	4 21 43	28	51 $\frac{1}{4}$	62 37 $\frac{2}{3}$	243 23 $\frac{3}{4}$	61 $\frac{1}{2}$	38	6	
♀ — 21.	8	46	51		47	16 $\frac{1}{2}$	62 26	☉ N. W. $\frac{1}{4}$ N. at 2d Observ. Ship's course E. $\frac{1}{2}$ N. 4 $\frac{1}{4}$ miles an hour.			4	
	9	41	19		45	42 $\frac{1}{3}$					6	
	12	44	20	4 13 7 $\frac{1}{2}$	29	34 $\frac{3}{4}$	62 20 $\frac{1}{8}$	244 1	59	38	10	
♂ — 22.	4	0	14	19 49 3	29	38 $\frac{2}{3}$	62 18 $\frac{1}{2}$	248 57	47	37	6	
☉ — 23				Noon.	46	57 $\frac{1}{2}$	62 22 $\frac{1}{4}$		55 $\frac{1}{4}$	38 $\frac{1}{2}$		Cloudy.
♂ — 24.	4	47	14	20 41 44	33	25	65 15 $\frac{5}{8}$	250 34 $\frac{1}{2}$	54	41		
♂ — 25.				Noon.	43	26 $\frac{1}{4}$	65 24 $\frac{5}{8}$		60 $\frac{1}{2}$	42 $\frac{1}{4}$		Hazy.
	14	35	14	6 28 46	14	12 $\frac{1}{4}$	65 45	250 22 $\frac{1}{2}$	62	39 $\frac{1}{4}$	6	
	3	3	2	18 55 54	22	37 $\frac{3}{4}$	66 25	250 15 $\frac{1}{4}$	50		5	
♀ — 26.				Noon.	42	1:	66 35 $\frac{1}{3}$		58 $\frac{1}{4}$	40		
♂ — 27.				Noon.	40	29 $\frac{1}{2}$	67 51 $\frac{3}{4}$		60	37 $\frac{1}{2}$		
♀ — 28.	3	13	8	19 12 10	22	58 $\frac{5}{8}$	69 41	252 3 $\frac{1}{2}$	46 $\frac{1}{2}$	34 $\frac{1}{2}$	4	
	3	52	58	19 52 6	26	17 $\frac{3}{8}$	69 42 $\frac{2}{3}$	252 5				
♂ — 29.				Noon.	37	51 $\frac{1}{4}$	69 58 $\frac{1}{2}$		53	36 $\frac{1}{2}$		
	12	42	32	4 44 23 $\frac{1}{2}$	23	3 $\frac{1}{3}$	70 18	252 47 $\frac{1}{2}$	63		5	
♂ — 31.				Noon.	38	4:	69 13		58 $\frac{1}{4}$	34		
	3	32	17	19 40 27	25	0 $\frac{1}{2}$	68 13	254 34 $\frac{7}{8}$	58 $\frac{1}{4}$	35	6	
	3	44	3	19 52 13	26	2 $\frac{5}{8}$	68 12 $\frac{1}{4}$	254 34 $\frac{1}{8}$			3	
	7	41	59		38	57					3	
♂ Feb. 1.					38	59:	68 1 $\frac{1}{4}$		58 $\frac{1}{2}$	35	3	} Latit. by two Alt. 68° 0 $\frac{1}{4}$ S.
	8	19	58		38	47 $\frac{1}{2}$					5	
	5	24	18		34	27 $\frac{1}{8}$	☉ N. Ship's course N. E. by N. 4 miles an hour.				3	
	7	31	17		39	30 $\frac{7}{8}$					4	
♀ — 2.				Noon.	39	35 $\frac{3}{4}$	67 7 $\frac{1}{2}$		54	37		
♂ — 3.				Noon.	40	1	66 25		57	35		

1774.	Time by Watch K.			Apparent Time.	Altitude of the $\odot$'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	M	S	H				A.	B.		
24 Feb. 3.	12	34	2	4 48 25	21 8	66 18	258 47 $\frac{1}{8}$			5	
	3	11	51	19 39 35 $\frac{1}{2}$	24 50 $\frac{1}{2}$	65 46 $\frac{5}{8}$	259 40	49	34	5	
4				Noon.	40 26 $\frac{1}{2}$	65 41 $\frac{2}{3}$		58 $\frac{3}{4}$	34 $\frac{1}{2}$		
	11	42	3	4 10 2	25 47 $\frac{1}{2}$	65 36	259 44 $\frac{3}{4}$	61	34 $\frac{2}{3}$	6	
	2	55	13	19 22 29	23 16 $\frac{3}{4}$	64 28 $\frac{1}{3}$	259 36	49	37 $\frac{1}{2}$	6	
5.	11	48	44	4 15 50 $\frac{1}{2}$	25 26 $\frac{2}{3}$	63 58 $\frac{2}{3}$	259 35 $\frac{1}{8}$			6	
	5	28	34		37 10 $\frac{2}{3}$					5	
6.				Noon.	41 38	63 53 $\frac{7}{8}$		60	39 $\frac{3}{4}$		
	3	21	48	19 55 23 $\frac{1}{2}$	25 57 $\frac{2}{3}$	61 31 $\frac{1}{4}$	161 17 $\frac{1}{2}$	46	37	5	
7.				Noon.	44 8	61 5 $\frac{1}{4}$		55	40		
	12	35	24	5 10 30 $\frac{1}{2}$	19 13 $\frac{9}{10}$	60 30 $\frac{1}{4}$	261 41 $\frac{3}{4}$	60 $\frac{1}{2}$	38	5	Cloudy, & bad horizon.
8.	3	40	32	20 17 22 $\frac{1}{2}$	31 23 $\frac{1}{3}$	54 2 $\frac{3}{4}$	262 15	54 $\frac{1}{4}$	44	5	
10.				Noon.	50 39 $\frac{1}{4}$	53 36 $\frac{2}{3}$		60	47		
	12	18	45 $\frac{1}{2}$	4 55 14	20 59 $\frac{1}{3}$	53 9	262 12	64	47	5	
11.	8	8	39		50 53 $\frac{1}{2}$	51 33 $\frac{1}{2}$	N. 76 W. at 2d obl. Ship's course N. $\frac{1}{2}$ E. 6 $\frac{1}{2}$ m. an h.			4	Strong wind, and a high sea.
	10	20	50		37 20 $\frac{1}{3}$					4	
	13	8	50	5 52 52 $\frac{1}{2}$	11 43	51 12 $\frac{5}{8}$	264 17 $\frac{1}{2}$	62 $\frac{3}{4}$	49 $\frac{1}{4}$	6	A high sea.
	3	10	47	19 54 14	28 35 $\frac{1}{2}$	50 23 $\frac{3}{5}$	263 58 $\frac{7}{8}$	53 $\frac{1}{2}$	47 $\frac{1}{2}$	4	Cloudy.
12.				Noon.	53 21 $\frac{1}{4}$	50 15		59 $\frac{1}{3}$	47 $\frac{3}{4}$		
	13	44	16	6 27 32	6 6 $\frac{1}{4}$	50 11	263 57	64 $\frac{1}{2}$	49	4	
13.				Noon.	53 4	50 12 $\frac{2}{3}$		60 $\frac{1}{4}$	52		
	11	49	35 $\frac{1}{2}$	4 27 49 $\frac{1}{2}$	24 44 $\frac{1}{4}$	50 26 $\frac{3}{4}$	262 43 $\frac{1}{4}$	64 $\frac{1}{3}$	51 $\frac{1}{2}$	6	
14.	12	14	28	4 55 9	20 14	49 28	263 21 $\frac{3}{4}$	68	51 $\frac{2}{3}$	6	
	3	6	42	19 45 25 $\frac{1}{2}$	26 42 $\frac{1}{12}$	48 55	262 53 $\frac{1}{2}$	59 $\frac{1}{2}$	51	6	
15.				Noon.	53 41:	48 55		63 $\frac{3}{4}$	54		Thick fog.
16.				Noon.	54 30 $\frac{1}{2}$:	47 45		59 $\frac{1}{3}$	56		Foggy.
	3	2	4 $\frac{1}{2}$	19 50 3	27 25 $\frac{5}{8}$	46 32 $\frac{1}{2}$	265 15	60	53	6	Very hazy.
	6	25	10		54 10 $\frac{3}{4}$	46 17 $\frac{1}{8}$	N. Ship's course N. 4 m. an ho. 155			5	Ditto.
17.				Noon.	55 37 $\frac{1}{2}$						Ditto.
	7	38	55		55 10 $\frac{1}{5}$	46 15 $\frac{1}{4}$	By two Altitudes.			5	Ditto.
	3	11	37	20 0 19	29 21 $\frac{3}{5}$	44 37 $\frac{1}{3}$		265 26 $\frac{1}{4}$	55 $\frac{3}{4}$ 52	6	A high sea.
18.				Noon.	57 23 $\frac{1}{4}$	44 10 $\frac{1}{5}$		56 $\frac{3}{4}$	50 $\frac{1}{3}$		Ditto.
	10	17	0		38 53 $\frac{1}{6}$	43 52 $\frac{1}{2}$	265 6 $\frac{1}{2}$			6	Ditto.
	3	19	57	20 3 7	30 6 $\frac{1}{4}$	42 24 $\frac{1}{2}$	264 5	58	55	4	Cloudy.
19.				Noon.	59 6 $\frac{1}{3}$	42 5 $\frac{1}{2}$		60 $\frac{1}{3}$	58 $\frac{1}{2}$		
	12	1	3	4 44 47	21 20 $\frac{1}{2}$	41 43 $\frac{1}{3}$	264 12 $\frac{1}{4}$	63 $\frac{1}{3}$	59	6	
	3	20	24	20 6 20 $\frac{1}{2}$	30 46 $\frac{1}{4}$	40 21	264 47 $\frac{1}{4}$	64	61	6	
20.				Noon.	60 51 $\frac{1}{5}$	39 59 $\frac{1}{2}$		66 $\frac{3}{4}$	66		
	10	35	31	3 22 13 $\frac{1}{2}$	36 47 $\frac{7}{8}$	39 43 $\frac{1}{6}$	264 59	69	66	10	
	2	1	2	18 49 27	16 9 $\frac{1}{3}$	38 21	265 25			6	
21.				Noon.	62 35 $\frac{1}{4}$	37 53 $\frac{4}{5}$		68 $\frac{1}{2}$	67 $\frac{1}{2}$		
	11	42	20	4 31 31	23 46 $\frac{1}{4}$	37 31 $\frac{1}{2}$	265 21 $\frac{1}{4}$			10	
	2	43	43		23 53 $\frac{1}{2}$	36 24	264 52	70 $\frac{1}{4}$	68 $\frac{1}{2}$	5	
22				Noon.	63 57	36 10 $\frac{2}{5}$		72 $\frac{1}{2}$	69		

ON BOARD THE RESOLUTION.

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1774.	Time by Watch K.			Apparent Time.	Altitude of the ☉'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	M	S	H	°	′	″	A.	B.		
♂ Feb. 22.	3	7	23	19 45 31½	26 54½	36 34½	262 51½			5	
♀ — 23.				Noon.	63 4	36 41½		71½	69		
	12	10	47	4 46 34	20 24½	36 48	262 1½		69	5	
	2	32	41		18 26½	37 16½	261 13½	69	71	6	
♂ — 24.				Noon.	61 56	37 27½		73½	71		
	4	6	24		34 25½	37 49½	258 42½	72	70	6	
♀ — 25.				Noon.	61 7½	37 53½		71	69		Cloudy.
	12	37	30		17 45½	37 45	258 18½	71½	68½	6	
	3	30	27½	19 48 15½	26 43½	36 53½	257 46½	69	65½	6	
♂ — 26.				Noon.	61 59	36 39½		67½	65		
	13	27	22	5 43 19	8 24½	36 11	257 18½	70½	64½	5	
	4	42	55	20 57 26	40 25½	35 4	256 56½		67	5	
☉ — 27.				Noon.	63 22½	34 54		68½	68½		
	12	31	9	4 45 33	19 53½	34 33½	256 54½		68	6	
	3	40	7	19 53 54	27 59½	33 24½	256 44½	70½	69½	5	Very cloudy.
♂ — 28.				Noon.	64 44½	33 9		72	71½		
	3	13	11	19 25 19½	21 58½	32 27	256 20			5	
♂ March 1.				Noon.	65 14½	32 17		74½	71½		
	12	55	24	5 8 2	14 52½	32 6	256 26½	76½	73½	5	
	3	37	46	19 51 11	27 20½	31 21½	256 38			5	
♀ — 2.				Noon.	65 54½	31 13½		74	74		
	12	38	5	4 52 9	18 5½	31 5½	256 47½		74	6	
	3	39	40½	19 55 13	28 5½	30 39½	257 9	73½	71	5	
♂ — 3.				Noon.	66 8½	30 36½		75	74		
	12	47	53		15 2	30 26½	257 41½	78½	75	3	
	3	23	53	19 42 49	25 25	30 6	257 59½	75½	74	5	
♀ — 4.				Noon.	66 24	29 58½		75½	74½		
	12	18	35	4 38 17	20 45½	29 52½	258 10	78½	76	5	
	2	44	9½	19 4 28	16 55½	29 46	258 18½			5	
♂ — 5.				Noon.	66 15	29 44½		77½	75		
	12	34	46	4 55 4	16 57½	29 41½	258 17½			6	
	3	35	43½	19 55 2	27 39½	29 30½	258 2½			6	Cloudy.
☉ — 6.				Noon.	66 14½	29 21½		76	74		
	12	57	3½	5 14 52	12 30½	29 11½	257 39	76½	73½	6	
	2	46	46	19 2 0	16 4½	28 36	256 59½			6	Cloudy.
♂ — 7.				Noon.	66 53	28 19½		75½	74½		
	13	3	12½	5 16 24	11 59½	28 2	256 28½		74	5	
	2	42	25	18 51 26	13 37½	27 16½	255 25	76	73½	6	
♀ — 8.				Noon.	67 45½	27 3½		76	75½		
	3	39	56½		24 20	27 6	253 19½		74½	6	
♂ — 9.				Noon.	67 19	27 6½		76½	77		
	11	55	59	3 54 25	29 43½	27 7	252 44	76½	76½	6	
♂ — 10.				Noon.	66 53	27 9½		76	76½		
	11	37	17	3 27 46½	35 17½	27 9½	250 43½	76	76	6	
	5	8	6	20 55 34	40 4½	27 10½	249 56½	76	75	6	
♀ — 11.				Noon.	66 27½	27 10½		76½	75		

1774.	Time by Watch K.			Apparent Time.	Altitude of the $\odot$'s L. L.	Latitude South.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	'	"	H	'	"	'	A.	B.		
♀ March 11.	5	20	50	5 6 47 $\frac{1}{2}$	13 24 $\frac{1}{2}$	27 11 $\frac{1}{2}$	249 33 $\frac{1}{2}$	76 $\frac{1}{2}$	75 $\frac{1}{2}$	6	
♂ — 12.				Noon.	65 57 $\frac{1}{2}$	27 17 $\frac{1}{2}$		75 $\frac{1}{2}$	75 $\frac{1}{2}$		
	3	53	16	19 37 20	22 50 $\frac{1}{2}$	27 11	249 2 $\frac{1}{2}$	74 $\frac{1}{2}$	75 $\frac{1}{2}$	2	Off the South Point of Easter Island.
☉ — 13.				Noon.	65 45	27 6 $\frac{1}{2}$		76	74		Off the North Point of ditto.
♂ — 14.				Noon.	65 20	27 7 $\frac{1}{2}$		74 $\frac{1}{2}$	74 $\frac{1}{2}$		At Anchor off the N. W. side of ditto.
	10	43	8	2 27 20	46 53 $\frac{1}{2}$	27 8	249 3 $\frac{1}{2}$	75 $\frac{1}{2}$	74 $\frac{1}{2}$	6	
♀ — 16.				Noon.	64 33 $\frac{1}{2}$	27 7		74 $\frac{1}{2}$	75		Off the N. W. side of ditto.
	11	38	51	3 23 3	35 4 $\frac{1}{2}$	27 7	248 57 $\frac{1}{2}$			6	
	3	33	8	19 15 41 $\frac{1}{2}$	17 22 $\frac{1}{2}$	26 56	248 32 $\frac{1}{2}$	75	75 $\frac{1}{2}$	6	
♂ — 17.				Noon.	64 28 $\frac{1}{2}$	26 48		77 $\frac{1}{2}$	77		
	12	37	27	4 18 17	23 5	26 38 $\frac{1}{2}$	248 5 $\frac{1}{2}$	77	76 $\frac{1}{2}$	5	Cloudy.
	3	11	41	18 50 34 $\frac{1}{2}$	11 43 $\frac{1}{2}$	26 16	247 34 $\frac{1}{2}$	76 $\frac{1}{2}$	75 $\frac{1}{2}$	5	
♀ — 18.				Noon.	64 48 $\frac{1}{2}$	26 4 $\frac{1}{2}$		78	76 $\frac{1}{2}$		
	11	41	57 $\frac{1}{2}$	3 20 42	35 31 $\frac{1}{2}$	26 0	247 31 $\frac{1}{2}$			5	
	5	3	15	20 40 28	35 54 $\frac{1}{2}$	25 6 $\frac{1}{2}$	247 7 $\frac{1}{2}$			6	Very cloudy.
♂ — 19.				Noon.	65 37 $\frac{1}{2}$	24 51 $\frac{1}{2}$		77 $\frac{1}{2}$	77		
	11	23	32	3 0 6 $\frac{1}{2}$	40 6 $\frac{1}{2}$	24 41 $\frac{1}{2}$	246 57	77 $\frac{1}{2}$	76 $\frac{1}{2}$	4	Clouds.
	5	8	31	20 42 48	36 45 $\frac{1}{2}$	23 21 $\frac{1}{2}$	246 20 $\frac{1}{2}$	77 $\frac{1}{2}$	77 $\frac{1}{2}$	5	
☉ — 20.				Noon.	67 4 $\frac{1}{2}$	23 1 $\frac{1}{2}$		77 $\frac{1}{2}$	77		
	5	20	24	20 51 18 $\frac{1}{2}$	39 4 $\frac{1}{2}$	21 23 $\frac{1}{2}$	245 28	77	77 $\frac{1}{2}$	3	
♂ — 21.				Noon.	68 38 $\frac{1}{2}$	21 3 $\frac{1}{2}$		78 $\frac{1}{2}$	77		
	11	40	17	3 10 15	38 51 $\frac{1}{2}$	20 48 $\frac{1}{2}$	245 13 $\frac{1}{2}$			6	Cloudy.
♂ — 22.				Noon.	69 57	19 21		78	76		
	11	37	20 $\frac{1}{2}$	3 3 31	40 39 $\frac{1}{2}$	19 13	244 14	76	75 $\frac{1}{2}$	10	
	5	36	20	20 58 30	41 17 $\frac{1}{2}$	18 18 $\frac{1}{2}$	243 12 $\frac{1}{2}$	77	76 $\frac{1}{2}$	5	
♀ — 23.				Noon.	70 44 $\frac{1}{2}$	18 9 $\frac{1}{2}$		79	77 $\frac{1}{2}$		
	5	39	14	20 57 6	41 7 $\frac{1}{2}$	17 16	242 5 $\frac{1}{2}$	77	75 $\frac{1}{2}$	6	
♂ — 24.				Noon.	71 24	17 6 $\frac{1}{2}$		78 $\frac{1}{2}$	77		
	13	21	30	4 38 9 $\frac{1}{2}$	18 57 $\frac{1}{2}$	16 55	241 46 $\frac{1}{2}$	79	77	5	
	4	2	52	19 16 18	17 38 $\frac{1}{2}$	16 18 $\frac{1}{2}$	240 56 $\frac{1}{2}$	78 $\frac{1}{2}$	76 $\frac{1}{2}$	6	
♀ — 25.				Noon.	72 5 $\frac{1}{2}$	16 1 $\frac{1}{2}$		79	78		
	13	3	0 $\frac{1}{2}$	4 14 45 $\frac{1}{2}$	24 31 $\frac{1}{2}$	15 51 $\frac{1}{2}$	240 30 $\frac{1}{2}$	79 $\frac{1}{2}$	76 $\frac{1}{2}$	6	
	3	51	10	18 59 12	13 36 $\frac{1}{2}$	15 4 $\frac{1}{2}$	239 33 $\frac{1}{2}$	78	78	6	
♂ — 26.				Noon.	72 57 $\frac{1}{2}$	14 45 $\frac{1}{2}$		78 $\frac{1}{2}$	78 $\frac{1}{2}$		
	13	55	31	5 1 9 $\frac{1}{2}$	13 31 $\frac{1}{2}$	14 28 $\frac{1}{2}$	238 55 $\frac{1}{2}$	79 $\frac{1}{2}$	78 $\frac{1}{2}$	5	
	4	25	48	19 27 28	20 27 $\frac{1}{2}$	13 29 $\frac{1}{2}$	237 55 $\frac{1}{2}$	78 $\frac{1}{2}$	78 $\frac{1}{2}$	6	
☉ — 27.				Noon.	74 7	13 12 $\frac{1}{2}$		79 $\frac{1}{2}$	80		
	13	32	29	4 32 0	20 37 $\frac{1}{2}$	12 57 $\frac{1}{2}$	237 24 $\frac{1}{2}$	80	79	6	
	4	2	15		13 20 $\frac{1}{2}$	12 3 $\frac{1}{2}$	236 18 $\frac{1}{2}$	79	78 $\frac{1}{2}$	6	
♂ — 28.				Noon.	75 10 $\frac{1}{2}$	11 45 $\frac{1}{2}$		80 $\frac{1}{2}$	80		
	13	30	37		22 36 $\frac{1}{2}$	11 32 $\frac{1}{2}$	235 50	80	80	6	
	4	13	3	19 2 40	14 37 $\frac{1}{2}$	10 38 $\frac{1}{2}$	234 49 $\frac{1}{2}$	79 $\frac{1}{2}$	79 $\frac{1}{2}$	6	
♀ — 29.				Noon.	76 12 $\frac{1}{2}$	10 20 $\frac{1}{2}$		81	81		
	14	8	54	4 55 50	15 0 $\frac{1}{2}$	10 10 $\frac{1}{2}$	234 8 $\frac{1}{2}$	81	80 $\frac{1}{2}$	5	

1774.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude South.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.	
	H	"					A.	B.			
♂ March 29.	4	40	5	19 21 52	19 20 $\frac{2}{3}$	9 34	232 49 $\frac{1}{2}$	80	79	6	
♂ — 30.			Noon.	76 47	9 22 $\frac{1}{3}$			80 $\frac{1}{4}$	80 $\frac{1}{4}$		
	13	48	32	4 27 21	21 58 $\frac{1}{4}$	9 21 $\frac{1}{2}$	232 4	80	80	6	
	5	0	41	19 33 45 $\frac{1}{2}$	22 11 $\frac{7}{8}$	9 18 $\frac{1}{3}$	230 36 $\frac{1}{2}$	80 $\frac{1}{4}$	80	6	
♂ — 31.			Noon.	76 28 $\frac{2}{3}$	9 17 $\frac{1}{4}$			80 $\frac{1}{2}$	80 $\frac{1}{2}$		
	14	8	15 $\frac{1}{2}$	4 38 38	19 9 $\frac{1}{4}$	9 20 $\frac{1}{4}$	229 55 $\frac{1}{4}$	80 $\frac{1}{2}$	80 $\frac{1}{2}$	5	
	4	33	1	18 58 33 $\frac{1}{2}$	13 31 $\frac{2}{3}$	9 27	228 41 $\frac{1}{4}$	80 $\frac{1}{2}$	80 $\frac{1}{4}$	5	
♀ April 1.			Noon.	75 53	9 29 $\frac{2}{3}$						
	13	23	45	3 47 4	31 33 $\frac{2}{3}$	9 30	228 7	80 $\frac{1}{2}$	81	5	
	4	37	24	18 55 56	12 48 $\frac{2}{3}$	9 29	226 53 $\frac{3}{8}$	80	79 $\frac{1}{2}$	5	
♂ — 2.			Noon.	75 30 $\frac{1}{2}$	9 28 $\frac{3}{8}$			81	81 $\frac{1}{4}$		
	13	12	55	3 29 14	35 45 $\frac{1}{2}$	9 29	226 19 $\frac{3}{8}$	81	81	4	
	4	42	17	18 53 54 $\frac{1}{2}$	12 14 $\frac{1}{3}$	9 32	225 7	80 $\frac{1}{2}$	80 $\frac{1}{4}$	5	
☉ — 3.			Noon.	75 4	9 32 $\frac{1}{3}$			81 $\frac{1}{4}$	81 $\frac{1}{4}$		
	13	12	1	3 21 41	37 27 $\frac{1}{4}$	9 32 $\frac{1}{2}$	224 37 $\frac{1}{2}$	82	81 $\frac{1}{4}$	5	
	4	57	48 $\frac{1}{2}$	19 2 33	14 15 $\frac{2}{3}$	9 32 $\frac{1}{3}$	223 22 $\frac{1}{4}$	81 $\frac{1}{4}$	81 $\frac{1}{2}$	5	
♂ — 4.			Noon.	74 41	9 32 $\frac{1}{4}$			82	82 $\frac{1}{4}$		
	13	51	49	3 54 11	29 32 $\frac{9}{10}$	9 32 $\frac{1}{3}$	222 45 $\frac{7}{8}$	82	82 $\frac{1}{2}$	5	
	5	20	51		18 11 $\frac{1}{8}$	9 33 $\frac{1}{4}$	221 42 $\frac{1}{4}$	82	81 $\frac{1}{4}$	5	
♂ — 5.			Noon.	74 17	9 33 $\frac{1}{3}$			83	83		
	4	59	0	18 52 22	11 40 $\frac{1}{3}$	9 21	220 24 $\frac{1}{4}$	82	81 $\frac{1}{4}$	5	
♂ — 6.			Noon.	74 8	9 19 $\frac{1}{2}$			83	83 $\frac{1}{2}$		
	14	47	33	4 38 12	18 47	9 30	219 45 $\frac{1}{2}$			1	
	5	1	56 $\frac{1}{2}$	18 51 14	11 17 $\frac{1}{3}$	9 36 $\frac{1}{2}$	219 23 $\frac{1}{4}$	80	77 $\frac{1}{2}$	5	
♀ — 8.	14	25	14 $\frac{1}{2}$	4 12 45	24 38	9 55 $\frac{1}{2}$	218 54 $\frac{1}{4}$	84	82 $\frac{1}{2}$	5	
♂ — 9.			Noon.	72 20 $\frac{1}{3}$	9 55 $\frac{1}{4}$		No Dip.		85		
	13	9	50	2 57 32	42 18 $\frac{1}{4}$	9 55 $\frac{1}{2}$	218 55 $\frac{3}{8}$	84	84 $\frac{1}{2}$	5	
☉ — 10.			Noon.	71 57 $\frac{3}{8}$	9 55 $\frac{1}{4}$		No Dip.		83 $\frac{1}{4}$	84 $\frac{1}{2}$	
	12	49	24	2 37 12	46 49 $\frac{3}{8}$	9 55 $\frac{1}{2}$	218 55	83 $\frac{1}{2}$	84 $\frac{1}{2}$	5	
♂ — 11.	12	50	11	2 37 54 $\frac{1}{2}$	46 40 $\frac{9}{10}$	9 55 $\frac{1}{2}$	218 53	85	85 $\frac{1}{2}$	6	
♂ — 12.	14	48	13 $\frac{1}{2}$		18 51 $\frac{1}{8}$			80 $\frac{1}{2}$	81 $\frac{1}{4}$	6	
	5	20	13	19 5 26 $\frac{1}{2}$	14 4	10 34 $\frac{1}{2}$	218 11 $\frac{1}{4}$	81 $\frac{1}{4}$	79	5	
♂ — 13.			Noon.	69 56 $\frac{1}{2}$	10 55 $\frac{1}{4}$			83 $\frac{1}{4}$	82 $\frac{1}{4}$		
	14	37	16	4 21 1 $\frac{1}{2}$	21 51 $\frac{1}{3}$	11 15 $\frac{1}{3}$	217 48 $\frac{1}{4}$	83	82 $\frac{2}{3}$	5	
	5	26	4	19 7 52	14 15 $\frac{5}{8}$	11 54 $\frac{1}{6}$	217 18 $\frac{3}{8}$	81 $\frac{1}{2}$	81 $\frac{1}{2}$	5	
♂ — 14.			Noon.	68 5 $\frac{1}{2}$	12 24 $\frac{1}{3}$			83	82 $\frac{1}{2}$		
	14	34	0	4 13 28	23 9 $\frac{2}{3}$	12 40	216 43	83	83	5	
	5	35	21	19 11 56	14 48 $\frac{2}{3}$	13 20	215 58 $\frac{1}{4}$	81 $\frac{1}{2}$	82 $\frac{1}{2}$	5	
♀ — 15.			Noon.	66 27	13 41 $\frac{1}{3}$			83	83		
	14	2	41	3 36 34	31 9 $\frac{1}{3}$	13 53 $\frac{1}{3}$	215 17 $\frac{3}{8}$	83	82 $\frac{1}{2}$	5	
	5	48	56	19 20 26	16 26 $\frac{2}{3}$	14 17 $\frac{7}{8}$	214 40 $\frac{1}{2}$	82 $\frac{1}{2}$	82	5	
♂ — 16.			Noon.	65 29	14 17 $\frac{7}{8}$			82 $\frac{1}{2}$	83 $\frac{1}{2}$		
	14	26	0 $\frac{1}{2}$	3 54 56	26 42	14 18	214 2	82 $\frac{1}{2}$	83 $\frac{1}{4}$	6	
	6	7	1	19 33 38	19 19 $\frac{1}{4}$	14 28 $\frac{2}{3}$	213 26 $\frac{1}{2}$	82	81 $\frac{1}{2}$	5	
☉ — 17.			Noon.	64 59 $\frac{1}{4}$	14 26 $\frac{1}{3}$						
	14	47	10 $\frac{1}{2}$	4 11 28 $\frac{1}{2}$	22 43 $\frac{1}{3}$	14 29 $\frac{2}{3}$	212 51			8	Off the opening into Taoukaà.

At anchor in Resolution Bay, in the island Ohitahoo, one of the Marquesas.

Taoukaà from N. 62° W. to S. 66° W. Off shore abt. 2 m.
Off the opening into Taoukaà.

1774.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	"	H				A.	B.		
☉ April 17.	5	41 34	19 5 16	12 36 $\frac{1}{2}$	14 34 $\frac{1}{2}$	212 41 $\frac{1}{2}$	82	81 $\frac{1}{2}$	5	Off the east side of the southern King George's Island.
☽ — 18.			Noon.	64 18 $\frac{1}{2}$	14 56 $\frac{1}{2}$					
	13	40 38	3 3 8	37 35 $\frac{5}{8}$	15 5 $\frac{5}{8}$	212 23			10	
	5	36 45 $\frac{1}{2}$	18 57 9 $\frac{1}{2}$	10 23 $\frac{1}{2}$	15 33 $\frac{3}{8}$	211 50 $\frac{1}{2}$	81 $\frac{1}{4}$	81 $\frac{1}{2}$	5	
☽ — 19.			Noon.	63 5 $\frac{1}{2}$	15 38 $\frac{1}{4}$		82	82 $\frac{1}{4}$		Amongst Palliser's Isles.
	14	51 14	4 9 13 $\frac{1}{2}$	22 35 $\frac{3}{4}$	15 41 $\frac{1}{2}$	211 13 $\frac{3}{4}$	82	82	6	Ditto.
☽ — 20.	14	37 29 $\frac{1}{2}$	3 52 0	26 7 $\frac{1}{2}$	16 17	210 23 $\frac{1}{2}$	80	79 $\frac{1}{2}$	6	Cloudy.
	5	59 36	19 9 38 $\frac{1}{2}$	12 34 $\frac{5}{8}$	17 12 $\frac{3}{4}$	209 13	81	81 $\frac{1}{2}$	5	
☽ — 21.			Noon.	60 30	17 32 $\frac{1}{2}$		82	82 $\frac{1}{2}$		
Next morning we anchored in Matavai Bay, Otaheite; in the afternoon I got my Clock and Instruments up on the usual spot, Point Venus, and on the 23d, and every day afterwards, until May 9th, I compared the Watch K, and Clock together, see p. 94. Hence I found that the Watch was 13 h. 4' 39", 2 too slow for mean time at Point Venus on 1/2 April 23 at noon. Consequently, it gave the difference of longitude, this time, between Queen Charlotte's Sound and Point Venus 33° 59' 22"; that is, it makes the latter place 208° 16' 26"$\frac{1}{2}$ East of Greenwich. Reckoning according to its Greenwich rate all the way from England, it places Point Venus 194° 24' 21" East of Drake's Island, or 190° 8' 13" East of Greenwich. It appears farther, from p. 52, that the watch was 13 h. 49' 47", 5 too slow for mean time at Point Venus, on August 31, 1773 at noon; and that it was then gaining at the rate of 8", 863 a day on mean time: It ought therefore to have been too slow for mean time on 1/2 April 23 at noon by 13 h. 15' 12", 3, instead of 13 h. 4' 39", 2, and of course the watch has erred 10' 33". 1, = 2° 38' 16"$\frac{1}{2}$ in longitude between these two days. Lastly, it was now gaining 11", 833 a day on mean time, and was 13 h. 1' 29", 56 too slow for mean time at Point Venus on May 9 at noon; and on these suppositions, and that the true longitude of Point Venus is 210° 25' 10"$\frac{1}{2}$ East of Greenwich, the following longitudes of the ship are computed.										
☉ May 15	15	3 23	4 1 31 $\frac{1}{2}$	20 38 $\frac{1}{2}$	16 42 $\frac{4}{5}$	208 52 $\frac{1}{3}$	82 $\frac{2}{3}$	83	6	
☽ — 16.			Noon.	54 0	16 44	Dip 2'	83	84 $\frac{1}{4}$		{ In a boat, and very uncertain.
	14	9 41	3 7 37 $\frac{1}{2}$	31 27 $\frac{3}{5}$	16 42 $\frac{4}{5}$	208 53 $\frac{3}{5}$	84	84 $\frac{1}{4}$	6	
	14	16 46	3 14 39 $\frac{3}{5}$	30 5 $\frac{1}{5}$	16 42 $\frac{4}{5}$	208 52 $\frac{1}{2}$	84	84	5	
☽ — 17.			Noon.	53 45 $\frac{3}{5}$	16 42 $\frac{3}{4}$	No Dip.	82 $\frac{2}{3}$	83		Very certain.
	15	19 56	4 17 40	17 1 $\frac{2}{5}$	16 42 $\frac{3}{5}$	208 53 $\frac{1}{5}$	85	83	8	
☽ — 18.			Noon.	53 31 $\frac{1}{2}$	16 43 $\frac{1}{3}$	No Dip.	83	82 $\frac{1}{4}$		A little uncertain.
☽ — 19.			Noon.	53 19 $\frac{1}{4}$	16 42 $\frac{1}{2}$		81 $\frac{1}{4}$	80 $\frac{1}{2}$		At Owharre Harbour,
	15	6 38 $\frac{1}{2}$	4 3 55	19 43 $\frac{2}{5}$	16 42 $\frac{4}{5}$	208 53	83 $\frac{1}{3}$	81 $\frac{1}{2}$	10	near the N. part of it.
☽ — 20.			Noon.	53 6 $\frac{2}{5}$	16 42 $\frac{3}{5}$		82	82 $\frac{1}{2}$		
	15	1 35	3 58 39 $\frac{1}{2}$	20 43 $\frac{3}{5}$	16 42 $\frac{4}{5}$	208 53 $\frac{3}{5}$	83 $\frac{1}{2}$	82 $\frac{1}{2}$	3	
	15	14 56 $\frac{1}{2}$	4 12 1	17 56 $\frac{1}{6}$	16 42 $\frac{4}{5}$	208 53 $\frac{4}{5}$	83 $\frac{1}{2}$	82 $\frac{1}{2}$	5	
☽ — 21.	15	15 51	4 12 30 $\frac{1}{2}$	17 44 $\frac{1}{4}$	16 42 $\frac{4}{5}$	208 51 $\frac{2}{5}$	84	83	8	
☽ — 23.			Noon.	52 26	16 51		81	83 $\frac{2}{3}$		
☽ — 26.			Noon.	51 54	16 45 $\frac{1}{2}$	No Dip.	80	81 $\frac{1}{2}$		
☽ — 27.			Noon.	51 43 $\frac{3}{5}$	16 45 $\frac{5}{8}$	No Dip.	80	79 $\frac{1}{2}$		

ON BOARD THE RESOLUTION.

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1774.	Time by Watch K.			Apparent Time.		Altitude of the ☉'s L. L.		Latitude South.		Longitude East by K.		Thermom.		Z of Obs.	Remarks.	
	H	'	"	H	'	°	'	°	'	°	'	A.	B.			
♀ May 27.	13	43	46 $\frac{1}{2}$	2	37	2 $\frac{1}{2}$	35	42 $\frac{1}{2}$	16	45 $\frac{1}{2}$	208	25 $\frac{1}{2}$	80 $\frac{1}{2}$	80 $\frac{1}{2}$	6	
♂ — 28.				Noon.			51	33 $\frac{1}{2}$	16	45 $\frac{1}{2}$	No dip.		80	80 $\frac{1}{2}$		
☉ — 29.	13	5	56 $\frac{1}{2}$	1	58	50	41	47 $\frac{1}{2}$	16	45 $\frac{1}{2}$	208	24 $\frac{1}{2}$	79 $\frac{1}{2}$	80 $\frac{1}{2}$	6	
☾ — 30.	14	53	12	3	45	55 $\frac{1}{2}$	22	32 $\frac{1}{2}$	16	45 $\frac{1}{2}$	208	26 $\frac{1}{2}$		81 $\frac{1}{2}$	6	
♂ — 31.	15	28	52	4	21	7 $\frac{1}{2}$	15	13 $\frac{1}{2}$	16	45 $\frac{1}{2}$	208	24 $\frac{1}{2}$	81 $\frac{1}{2}$	82 $\frac{1}{2}$	5	
♀ June 1.	14	38	56	3	30	52 $\frac{1}{2}$	25	20 $\frac{1}{2}$	16	45 $\frac{1}{2}$	208	24 $\frac{1}{2}$	81 $\frac{1}{2}$	80 $\frac{1}{2}$	6	
☾ — 2.	14	13	25	3	5	2	30	11 $\frac{1}{2}$	16	45 $\frac{1}{2}$	208	24 $\frac{1}{2}$	82	81 $\frac{1}{2}$	5	
☉ — 3.	14	29	53	3	21	12	27	3 $\frac{1}{2}$	16	45 $\frac{1}{2}$	208	25 $\frac{1}{2}$	82	81	6	
♀ — 4.	14	17	37	3	8	37	29	22	16	45 $\frac{1}{2}$	208	25 $\frac{1}{2}$	83	81 $\frac{1}{2}$	5	
♂ — 5.	14	19	27	3	8	54 $\frac{1}{2}$	29	16 $\frac{1}{2}$	16	42 $\frac{1}{2}$	208	8 $\frac{1}{2}$		81 $\frac{1}{2}$	6	Bolabola N. 3° $\frac{1}{2}$ E. West End of Otahe N. 58° E.
☉ — 6.	8	12	3	20	58	30 $\frac{1}{2}$	30	34 $\frac{1}{2}$	16	44 $\frac{1}{2}$	207	27 $\frac{1}{2}$	81 $\frac{1}{2}$	82 $\frac{1}{2}$	10	
☾ — 7.				Noon.			50	29 $\frac{1}{2}$	16	48			81 $\frac{1}{2}$	82 $\frac{1}{2}$		
☉ — 8.	14	27	2	3	12	16	28	31	16	47 $\frac{1}{2}$	207	23 $\frac{1}{2}$	82	83	5	
☾ — 9.	7	17	54	19	59	52	19	4 $\frac{1}{2}$	16	54 $\frac{1}{2}$	206	25 $\frac{1}{2}$	82	81 $\frac{1}{2}$	6	Very hazy.
☉ — 10.				Noon.			50	21	16	49 $\frac{1}{2}$			82 $\frac{1}{2}$	82 $\frac{1}{2}$		Hazy, & bad horizon.
☾ — 11.	14	7	1 $\frac{1}{2}$	2	41	32	33	37 $\frac{1}{2}$	17	14 $\frac{1}{2}$	204	40 $\frac{1}{2}$	80 $\frac{1}{2}$	80	2	Very cloudy.
☉ — 12.	8	2	28 $\frac{1}{2}$	20	34	56	25	30 $\frac{1}{2}$	17	31 $\frac{1}{2}$	204	14 $\frac{1}{2}$	80	79 $\frac{1}{2}$	6	
☾ — 13.				Noon.			49	26 $\frac{1}{2}$	17	32 $\frac{1}{2}$			81	80 $\frac{1}{2}$		
☉ — 14.	15	22	51 $\frac{1}{2}$	3	54	28	19	45 $\frac{1}{2}$	17	33	204	3 $\frac{1}{2}$	82	82	4	
☾ — 15.	6	52	23	19	21	57 $\frac{1}{2}$	10	48 $\frac{1}{2}$	17	37 $\frac{1}{2}$	203	37	83	79	6	
☉ — 16.				Noon.			49	15	17	38 $\frac{1}{2}$			81 $\frac{1}{2}$	81		
☾ — 17.	16	3	13	4	31	32	12	7	17	39 $\frac{1}{2}$	203	19 $\frac{1}{2}$	82	81	5	
☉ — 18.	8	53	46	21	19	38 $\frac{1}{2}$	33	17	17	47 $\frac{1}{2}$	202	47 $\frac{1}{2}$	79	76 $\frac{1}{2}$	6	
☾ — 19.				Noon.			49	1 $\frac{1}{2}$	17	48			78 $\frac{1}{2}$	77 $\frac{1}{2}$		Very cloudy.
☉ — 20.	16	20	13	4	45	54	9	17 $\frac{1}{2}$	17	49 $\frac{1}{2}$	202	45 $\frac{1}{2}$	78 $\frac{1}{2}$	77 $\frac{1}{2}$	6	Ditto.
☾ — 21.	7	13	17	19	37	25	13	47 $\frac{1}{2}$	17	51	202	26 $\frac{1}{2}$	78 $\frac{1}{2}$	77	6	
☉ — 22.				Noon.			48	48 $\frac{1}{2}$	17	55 $\frac{1}{2}$			78	77 $\frac{1}{2}$		
☾ — 23.	15	43	10	4	4	40	17	21 $\frac{1}{2}$	18	0 $\frac{1}{2}$	201	49 $\frac{1}{2}$	77 $\frac{1}{2}$	77	6	
☉ — 24.				Noon.			48	31	18	10 $\frac{1}{2}$			75 $\frac{1}{2}$	75		
☾ — 25.	9	31	50	21	40	37 $\frac{1}{2}$	35	48	18	46	198	49	76 $\frac{1}{2}$	78 $\frac{1}{2}$	3	
☉ — 26.				Noon.			47	51	18	45 $\frac{1}{2}$			77 $\frac{1}{2}$	80		
☾ — 27.	15	41	33	3	47	42	20	12 $\frac{1}{2}$	18	46 $\frac{1}{2}$	198	11	78	77 $\frac{1}{2}$	3	Cloudy.
☉ — 28.	15	46	1	3	51	48	19	24 $\frac{1}{2}$	18	46 $\frac{1}{2}$	198	5 $\frac{1}{2}$	78	77 $\frac{1}{2}$	6	Ditto.
☾ — 29.	15	57	57	4	4	1	17	0 $\frac{1}{2}$	18	46 $\frac{1}{2}$	198	7 $\frac{1}{2}$	78	77 $\frac{1}{2}$	6	Ditto.
☉ — 30.	7	18	46	19	21	16 $\frac{1}{2}$	10	1	18	40 $\frac{1}{2}$	197	17 $\frac{1}{2}$	76	75 $\frac{1}{2}$	6	
☾ — 31.				Noon.			47	57 $\frac{1}{2}$	18	35 $\frac{1}{2}$			76	75 $\frac{1}{2}$		
☉ — 32.	16	6	29	4	7	45	16	20 $\frac{1}{2}$	18	34 $\frac{1}{2}$	197	4 $\frac{1}{2}$	77 $\frac{1}{2}$	76 $\frac{1}{2}$	6	
☾ — 33.	7	11	9	19	12	12	8	10 $\frac{1}{2}$	18	32	197	3 $\frac{1}{2}$	76 $\frac{1}{2}$	75 $\frac{1}{2}$	6	
☉ — 34.				Noon.			48	2 $\frac{1}{2}$	18	27 $\frac{1}{2}$			77	75 $\frac{1}{2}$		
☾ — 35.	16	8	51 $\frac{1}{2}$	4	9	4	16	8 $\frac{1}{2}$	18	25 $\frac{1}{2}$	196	54 $\frac{1}{2}$	76 $\frac{1}{2}$	75 $\frac{1}{2}$	5	
☉ — 36.	8	3	33	20	1	46 $\frac{1}{2}$	18	19 $\frac{1}{2}$	18	20 $\frac{1}{2}$	196	28 $\frac{1}{2}$	76 $\frac{1}{2}$	74 $\frac{1}{2}$	6	
☾ — 37.				Noon.			48	16 $\frac{1}{2}$	18	11 $\frac{1}{2}$			75 $\frac{1}{2}$	75 $\frac{1}{2}$		
☉ — 38.	15	56	7	3	54	58	19	9 $\frac{1}{2}$	17	59 $\frac{1}{2}$	196	40 $\frac{1}{2}$	76	75 $\frac{1}{2}$	3	
☾ — 39.	7	28	59	19	23	20	10	43 $\frac{1}{2}$	18	0 $\frac{1}{2}$	195	36 $\frac{1}{2}$	79	73 $\frac{1}{2}$	6	
☉ — 40.				Noon.			48	22 $\frac{1}{2}$	18	2 $\frac{1}{2}$			75	75		

1774.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	M					A.	B.		
June 17.	15	14	50	3 7 14	28 7 $\frac{1}{2}$	18 5	195 9	75 $\frac{1}{2}$ 74 $\frac{1}{2}$	6	
	15	25	51	3 18 0	26 8 $\frac{1}{2}$	18 5	195 5 $\frac{1}{2}$	75 $\frac{1}{2}$ 74 $\frac{1}{2}$	6	
	7	33	58 $\frac{1}{2}$	19 21 44	10 13 $\frac{3}{4}$	18 16	194 3 $\frac{1}{2}$	74 73 $\frac{1}{2}$	6	
h — 18.	7	50	4	19 31 30	12 11 $\frac{1}{2}$	18 22 $\frac{1}{2}$	192 35 $\frac{1}{2}$	75 74	5	
☉ — 19.			Noon.		47 57 $\frac{1}{2}$	18 24 $\frac{9}{10}$		75 $\frac{1}{2}$ 77		
	16	23	46	4 2 57	17 15 $\frac{7}{8}$	18 27 $\frac{3}{8}$	192 4	76 $\frac{1}{2}$ 76	7	
	9	54	18	21 28 29 $\frac{1}{2}$	33 43 $\frac{7}{8}$	18 45	190 52 $\frac{7}{8}$	76 76 $\frac{1}{2}$	6	
D — 20.			Noon.		47 32	18 49 $\frac{1}{2}$		77 77 $\frac{1}{2}$		
	17	5	49	4 37 52	9 56 $\frac{5}{8}$	18 59	190 22 $\frac{7}{8}$	76 $\frac{1}{2}$ 76 $\frac{1}{2}$	10	
	8	17	24	19 48 13	15 16 $\frac{1}{2}$	18 55	190 8 $\frac{1}{2}$	75 $\frac{1}{2}$ 76	5	
— 21.	9	7	35	20 38 11	24 52 $\frac{5}{8}$	18 54 $\frac{1}{2}$	190 5 $\frac{1}{2}$	77 78 $\frac{1}{2}$	8	
	11	7	30	22 37 28	42 53 $\frac{3}{4}$	18 55 $\frac{1}{2}$	189 55 $\frac{7}{8}$	78 78	6	
	Ramfden's Q.		} Noon.	{	47 24 $\frac{7}{8}$	18 56 $\frac{1}{2}$		78 78		
	Dollond's Q.				47 24 $\frac{1}{2}$	18 57 $\frac{1}{2}$				
		14	47	31	2 17 17	35 43 $\frac{1}{2}$	19 1 $\frac{1}{2}$	189 54 $\frac{1}{2}$		6
— 22.	16	5	4	3 34 48	22 24 $\frac{1}{2}$	19 2	189 54	79 $\frac{1}{2}$ 78	6	
	8	14	28	19 41 49 $\frac{1}{2}$	13 46	19 20	189 22 $\frac{3}{8}$	77 76	6	
			Noon.		46 58 $\frac{1}{2}$	19 23 $\frac{1}{2}$		78 $\frac{1}{2}$ 77 $\frac{1}{2}$		
	16	41	23	4 7 28	15 51 $\frac{1}{2}$	19 27 $\frac{1}{2}$	189 5 $\frac{1}{2}$	78 $\frac{1}{2}$ 77 $\frac{1}{2}$	6	
	8	6	50	19 28 43	10 55 $\frac{5}{8}$	19 43	188 6 $\frac{1}{2}$	77 $\frac{1}{2}$ 76 $\frac{1}{2}$	6	
u — 23.			Noon.		46 32 $\frac{1}{2}$	19 49 $\frac{1}{2}$		78 77 $\frac{1}{2}$		
	16	37	41	3 57 14 $\frac{1}{2}$	17 33 $\frac{1}{2}$	19 57 $\frac{1}{2}$	187 33 $\frac{1}{2}$	77 $\frac{1}{2}$ 77 $\frac{1}{2}$	6	
	8	12	43	19 27 13	10 17 $\frac{1}{2}$	20 24 $\frac{1}{2}$	186 22	78 76 $\frac{1}{2}$	6	
q — 24.			Noon.		45 58	20 24 $\frac{1}{2}$		79 79		
	17	10	37 $\frac{1}{2}$	4 22 42 $\frac{1}{2}$	12 21 $\frac{1}{2}$	20 19 $\frac{5}{8}$	185 48 $\frac{1}{2}$	79 $\frac{1}{2}$ 78 $\frac{1}{2}$	3	
	8	43	45	19 54 2	15 43 $\frac{9}{10}$	20 12	185 24 $\frac{7}{8}$	77 78	5	
	8	43	45		15 43 $\frac{9}{10}$		☉ N. 46° E.		5	
q — 25.	13	22	59		45 19 $\frac{1}{2}$	20 20 $\frac{5}{8}$	Ship's course S. by W. $\frac{3}{4}$ W. 4 miles an hour.			
	14	27	3		40 2 $\frac{1}{2}$		☉ N. 19° W.		6	
	14	27	3	1 37 14	40 2 $\frac{1}{2}$	20 22	185 24 $\frac{1}{2}$		6	
☉ — 26.	8	31	55	19 41 0	13 3 $\frac{1}{2}$	20 26 $\frac{3}{8}$	185 13 $\frac{1}{2}$	77 76	6	
			Noon.		46 2 $\frac{7}{8}$	20 23 $\frac{1}{8}$		75 $\frac{1}{2}$ 75		
	16	22	36	3 30 36	22 29 $\frac{1}{2}$	20 15 $\frac{1}{2}$	184 58 $\frac{1}{2}$	75 $\frac{1}{2}$ 78	6	
	8	28	13 $\frac{1}{2}$	19 36 0	12 10 $\frac{3}{4}$	20 15	184 59 $\frac{1}{2}$	75 74 $\frac{1}{2}$	9	
	8	45	54	19 53 46	15 31 $\frac{5}{8}$	20 15	185 0 $\frac{1}{2}$		5	
D — 27.	Ramfden's Q.		} Noon.	{	46 12	20 15 $\frac{1}{2}$		76 74 $\frac{1}{2}$		
	Dollond's Q.				46 13	20 14 $\frac{1}{2}$				
		14	59	55	2 7 34	36 16 $\frac{3}{4}$	20 15	184 59 $\frac{1}{2}$	76 74 $\frac{1}{2}$	6
— 28.	8	54	49 $\frac{1}{2}$	20 2 8	17 21 $\frac{1}{2}$	20 15	184 59		10	
			Noon.		46 15 $\frac{1}{2}$	20 15	Ramfden's Quadrant.			
					46 15 $\frac{1}{2}$	20 14 $\frac{1}{2}$	Dollond's Quadrant.			
	17	28	14	4 35 26 $\frac{1}{2}$	9 53 $\frac{7}{8}$	20 15	184 59 $\frac{1}{2}$	76 $\frac{1}{2}$ 74 $\frac{1}{2}$	6	

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1774.	Time by Watch K.		Apparent Time.		Altitude of the ☉'s L. L.		Latitude S.		Longitude East by K.		Thermom.		No. of Obs.	Remarks.
	H	"	H	"	°	'	°	'	°	'	A.	B.		
♂ June 28.	Captain Cook and Mr. Cooper being both on shore at noon, and not coming off till late, I could not wind up the watch at the usual time; and being engaged in the evening, when they did come on board, making computations, &c. unfortunately forgot it until it was down. I wound it up as soon as I recollected it, set it a going, and soon after made the following observations:													
	6 36 29	19 54 41	15 49 11	20 15 1	175	74 1/2	6	At Annamocka.						
	Hence it appears, that the watch was 2 h. 10' 38 1/2" slower than before.													
	7 22 17	20 39 58	24 31 1/2	20 15 1	175 1/2	75 1/2	6	At Annamocka.						
	By these the watch was 2 h. 10' 43 1/2" slower than before. The mean of both is 2 h. 10' 41"													
♀ — 29.	Noon. 46 27 1/2 20 05 3/4 176 74 1/2 6													
	14 21 7 1/2	3 38 24	21 9 1/2	20 10	184 55 1/2	76 76 1/2	5							
	7 11 57		22 36 3/4	19 59 1/2		75 75	2							
♂ — 30.	Noon. 46 44 1/2 19 51 1/2 175 75 1/2 6													
	7 45 51 1/2	20 57 18	27 54 1/2	19 53	183 38 1/2	74 75	6							
♀ July 1.	Noon. 46 46 19 54 1/2 174 75 6													
	14 58 38	4 8 2 1/2	15 38 1 1/2	19 57	183 9 3/4	73 73 1/2	6							
	7 23 51 1/2	20 28 29 1/2	22 38 1/2	20 0 1/2	182 2 1/2	75 72	6							
	7 29 28	20 33 56	23 38 3/4	20 0 1/2	181 59 3/4	75 72	10							
♂ — 2.	Noon. 46 41 20 3 1/2 172 72 5													
	16 2 54		4 8 3/4	20 0		72 72 1/2	5							
	6 54 19	19 56 58	16 45	19 45	181 34 1/2	73 72	6							
	7 1 39	20 4 2	18 9 1/2	19 45	181 34 1/2	73 72	6							
♀ — 3.	Noon. 47 1 1/2 19 47 173 74 6													
	15 11 39	4 13 30 1/2	14 40 3/4	19 48	181 28 1/2	74 72 1/2	6							
	6 48 10 1/2	19 48 38	15 3	19 58 1/2	181 11	74 74 1/2	6							
	7 11 2	20 11 23	19 29 1/2	19 58 3/4	181 9 1/2	75 75 1/2	6							
	7 16 50	20 16 56	20 35 3/4	19 58 3/4	181 5 1/2	75 75 1/2	6							
	8 31 36	21 31 32	33 40 1/2	20 0	181 3 1/2	76 75 1/2	6							
♂ — 4.	Noon. 46 48 1/2 20 4 3/4 176 75 1/2 6													
	15 12 26 1/2	4 11 27	14 57	20 9	180 51 1/2	75 76 1/2	6							
	6 38 58 1/2	19 35 6	12 4 1/2	20 34 3/4	180 11 1/2	78 75	6							
	6 46 46	19 42 49	13 36 3/4	20 34 3/4	180 10 1/2	78 75	6							
♀ — 5.	Noon. 46 20 1/2 20 38 1/2 176 75 1/2 6													
	8 48 25	21 38 51	34 15	20 53	178 52 1/2	76 76	6	Cloudy.						
♂ — 6.	Noon. 46 9 20 55 3/4 176 76 1/2 6													
	15 53 44	4 42 12	8 28 1/2	20 55 1/2	178 24 1/2	76 76 1/2	6							
	7 12 5	19 59 15	16 45 3/4	20 53 3/4	178 8 1/2	76 75	8	Very cloudy.						
♀ — 7.	Noon. 46 20 1/2 20 50 1/2 176 77 6													
	15 22 42	4 7 12	15 35 3/4	20 48 1/2	177 30 3/4	77 77 1/2	6							
	6 58 35	19 41 50	13 26 3/4	20 47 1/2	177 15 1/2	76 75	6	Cloudy.						
♂ — 8.	Noon. 46 35 3/4 20 41 1/2 177 78 6													
	6 52 6	19 29 16	11 12 3/4	20 20	175 49 1/2	78 77								
♀ — 9.	Noon. 47 0 3/4 20 23 1/2 178 78 6													
♂ — 10.	Noon. 47 38 1/2 19 53 3/4 174 74 1/2 6													
	14 47 27 1/2	3 20 3 1/2	25 24 3/4	19 43	174 47 1/2	74 74	6	Cloudy, and bad horizon.						

1774.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude South.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.	
	H	M					A.	B.			
☉ July 10.	6	59	41	19 31 36	12 32 $\frac{1}{2}$	18 49 $\frac{1}{2}$	174 40 $\frac{1}{2}$	73 $\frac{1}{2}$	73	6	Cloudy.
☽ — 11.			Noon.	49 13	18 26 $\frac{1}{2}$		74	74			
	15	28	9	3 57 49	19 10 $\frac{3}{8}$	18 9	174 8 $\frac{3}{8}$	75	75	6	
	7	3	3	19 31 28	13 8 $\frac{3}{8}$	17 38	173 53 $\frac{1}{2}$	75	74 $\frac{1}{2}$	7	Cloudy.
☽ — 12.			Noon.	50 27	17 20 $\frac{1}{2}$		76	76			
	15	46	43	4 12 57	16 38 $\frac{2}{3}$	17 7	173 22 $\frac{3}{8}$	76 $\frac{1}{2}$	75 $\frac{2}{3}$	6	
	7	2	8	19 27 1 $\frac{1}{2}$	12 45	16 36 $\frac{1}{2}$	173 5	75 $\frac{2}{3}$	75 $\frac{1}{3}$	6	
☽ — 13.	15	28	8 $\frac{1}{2}$	3 51 26	21 31 $\frac{1}{2}$	16 18 $\frac{1}{2}$	172 42 $\frac{7}{8}$			6	
	6	52	29 $\frac{1}{2}$	19 13 36	10 18 $\frac{7}{8}$	15 49	172 13 $\frac{1}{8}$	75 $\frac{2}{3}$	76	6	
☽ — 14.			Noon.	52 25 $\frac{1}{2}$	15 39 $\frac{1}{2}$		77 $\frac{1}{2}$	78			
	15	15	43	3 35 3 $\frac{1}{2}$	25 19 $\frac{1}{6}$	15 32 $\frac{1}{6}$	171 48 $\frac{1}{2}$	78	77 $\frac{1}{2}$	6	
	7	12	21	19 29 8	13 57 $\frac{1}{2}$	15 13 $\frac{1}{2}$	171 13 $\frac{1}{2}$	77 $\frac{1}{2}$	76 $\frac{1}{2}$	6	
☽ — 15.			Noon.	53 4 $\frac{1}{2}$	15 9 $\frac{1}{2}$		78 $\frac{1}{2}$	79 $\frac{2}{3}$			
	15	21	13 $\frac{1}{2}$	3 34 53	25 37 $\frac{3}{8}$	15 9 $\frac{1}{2}$	170 27 $\frac{3}{4}$	80	79	6	
	15	26	55	3 40 30	24 29 $\frac{3}{8}$	15 9 $\frac{1}{2}$	170 26 $\frac{5}{8}$	80	79	6	
	9	25	43	21 33 24	38 33 $\frac{1}{2}$	15 5 $\frac{1}{2}$	169 1 $\frac{1}{2}$	78 $\frac{1}{2}$	79 $\frac{1}{2}$	3	
☽ — 16.			Noon.	53 18 $\frac{1}{2}$	15 5		78 $\frac{1}{2}$	79 $\frac{1}{2}$			
☉ — 17.	11	6	52 $\frac{1}{2}$	51 32 $\frac{1}{2}$	15 3 $\frac{1}{8}$		78	76 $\frac{1}{2}$		4	
☽ — 18.	12	16	28 $\frac{1}{2}$	53 25 $\frac{1}{2}$	15 2 $\frac{1}{2}$		78 $\frac{1}{2}$	76 $\frac{1}{2}$		8	☉ N. by E. $\frac{1}{4}$ E. at 1 ft. Obf. and N. 65° W. at 2d. Ship's course S. 10° W. 5 $\frac{1}{4}$ miles an hour.
	14	42	10	35 54 $\frac{3}{8}$	15 14 $\frac{1}{2}$	167 20 $\frac{1}{2}$	78 $\frac{1}{2}$	76 $\frac{1}{2}$		8	
	14	42	10	2 42 27 $\frac{1}{2}$	35 54 $\frac{3}{8}$	15 14 $\frac{1}{2}$	167 20 $\frac{1}{2}$	78 $\frac{1}{2}$	76 $\frac{1}{2}$	8	
	15	56	27	3 56 52 $\frac{1}{2}$	21 17 $\frac{3}{8}$	15 19 $\frac{1}{6}$	167 22 $\frac{1}{2}$	78	76 $\frac{1}{2}$	5	Cloudy.
☽ — 19.			Noon.	53 41 $\frac{1}{2}$	15 12 $\frac{1}{2}$		76 $\frac{1}{2}$	76 $\frac{1}{2}$			
	15	58	45	3 59 49 $\frac{1}{2}$	20 47 $\frac{1}{2}$	15 17 $\frac{1}{2}$	167 36 $\frac{1}{8}$	77	76 $\frac{1}{2}$	3	
	16	1	48 $\frac{1}{2}$	4 2 53 $\frac{1}{2}$	20 7 $\frac{5}{8}$	15 17 $\frac{1}{2}$	167 36 $\frac{3}{8}$			3	
☽ — 20.			Noon.	53 36 $\frac{1}{2}$	15 28 $\frac{1}{2}$			74 $\frac{1}{2}$	75		Ramsden's Quad. Dollond's Quad.
				53 36	15 29 $\frac{1}{2}$						
	16	35	35	4 36 32 $\frac{1}{2}$	12 54 $\frac{1}{2}$	15 39	167 37 $\frac{1}{2}$	75	75	7	
	7	51	33 $\frac{1}{2}$	19 52 19	18 51 $\frac{3}{8}$	16 6 $\frac{1}{2}$	167 38	75	74 $\frac{1}{2}$	6	N.E. point of Ambrim N. 88° E. S. point of Whitsun, N. 57° E. Ramsden's Quad. Dollond's Quad.
☽ — 21.			Noon.	52 59	16 17 $\frac{5}{8}$			76	77 $\frac{1}{2}$		
				52 58 $\frac{2}{3}$	16 17 $\frac{7}{8}$						
	9	41	31 $\frac{1}{2}$	21 40 54 $\frac{1}{2}$	39 38 $\frac{1}{2}$	16 25 $\frac{1}{2}$	167 21 $\frac{3}{8}$	74	74 $\frac{1}{2}$	6	In Sandwich's Har- bour, in Mallico- la.
☽ — 22.			Noon.	53 3	16 25 $\frac{1}{2}$			76 $\frac{1}{2}$	76	2	
	8	8	13 $\frac{2}{3}$	20 7 24	22 1 $\frac{3}{8}$	16 25 $\frac{1}{2}$	167 21 $\frac{1}{2}$	77	77	6	
☽ — 23.			Noon.	53 15 $\frac{1}{2}$	16 24 $\frac{1}{2}$			79	80		Off Sandwich Harbour. S. point of Ambrim N. 20° E. Maskelyne's Isles, S. 16° W.
	16	5	12	4 4 44	19 34 $\frac{1}{2}$	16 21	167 25 $\frac{1}{2}$	79 $\frac{2}{3}$	78 $\frac{1}{2}$	6	
☉ — 24.	8	4	17 $\frac{1}{2}$	20 6 1 $\frac{1}{2}$	21 35 $\frac{1}{2}$	17 6 $\frac{3}{8}$	168 6 $\frac{1}{2}$	78	77 $\frac{1}{2}$	6	
	9	38	49	21 40 9	39 23 $\frac{4}{5}$	17 11 $\frac{1}{2}$	168 0 $\frac{1}{2}$	78 $\frac{1}{2}$	77 $\frac{1}{2}$	6	Three-hills N. 50° W. Shepherd's Isles N. 30° E. Monument N. 6° E. Montagu Isle S. 61° W.
☽ — 25.			Noon.	52 47 $\frac{1}{2}$	17 18 $\frac{1}{2}$			79	80 $\frac{1}{2}$	2	
	16	8	52	4 10 18	18 6 $\frac{3}{8}$	17 23	168 3	80	79	5	
											E. end of Montagu S. 60° W. Monument N. 11° W.

ON BOARD THE RESOLUTION.

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1774.	Time by Watch K.		Apparent Time.	Altitude of the $\odot$'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No of Obs.	Remarks.
	H	M					A.	B.		
D July 25.	7	29 21 $\frac{1}{2}$	19 29 44	13 57 $\frac{1}{2}$	17 21 $\frac{1}{3}$	167 49 $\frac{1}{8}$	79	78 $\frac{1}{2}$	6	Monument N. 48° E. E. point of Montagu S. 49° E.
♂ — 26.	11	43 41		52 36 $\frac{1}{4}$	17 30 $\frac{1}{2}$	Ship's course E. $\frac{1}{2}$ S. 1 $\frac{1}{2}$ miles an h. $\odot$ N. 47° $\frac{1}{2}$ W. at 2 dob.			3	Between Hinch- ingbroke and Mon- tagu Islands.
	13	51 12		43 37					5	
	16	28 52	4 30 20	13 53 $\frac{5}{8}$	17 33	168 6 $\frac{1}{4}$	80	81	6	
♀ — 27.	7	38 41	19 41 48 $\frac{1}{2}$	16 22 $\frac{2}{3}$	17 52 $\frac{2}{3}$	168 33 $\frac{1}{4}$	74 $\frac{1}{4}$	74	6	S. end of Sandwich S 80° W. Traitor's Head S. 24° E.
			Noon.	52 31	18 0 $\frac{1}{4}$		74	73 $\frac{1}{4}$		Erramanga from S. to S. 17° E.
	16	13 55	4 18 13 $\frac{1}{2}$	16 17 $\frac{1}{12}$	18 9 $\frac{2}{3}$	168 52 $\frac{1}{2}$	74 $\frac{3}{4}$	74 $\frac{3}{4}$	6	Erramanga S. 1° E. to S. 20° W.
♂ — 28.	8	22 20	20 47 44	25 38 $\frac{1}{2}$	18 25 $\frac{2}{3}$	169 10 $\frac{1}{4}$	72	72 $\frac{1}{2}$	6	Erramanga from S. 26° W. to S. 62° W.
			Noon.	52 20 $\frac{1}{2}$	18 24 $\frac{7}{8}$		71 $\frac{1}{2}$	71 $\frac{1}{3}$		Traitor's Head S. 38° W.
	16	31 16	4 36 28	12 24 $\frac{5}{8}$	18 24	169 8 $\frac{1}{4}$	73	75	6	Traitor's Head S. 29° W.
♀ — 29.	7	37 38	19 43 29	16 40	18 27	169 20	72	70 $\frac{1}{2}$	8	Traitor's Head S. 51° W.
	7	45 28	19 51 20	18 19	18 27	169 20 $\frac{1}{8}$	72	70 $\frac{1}{2}$	8	
			Noon.	52 29	18 30 $\frac{1}{3}$		73	74		Traitor's Head S. 61° W.
♂ — 30.	16	28 23	4 33 52	13 0	18 34 $\frac{1}{2}$	169 15 $\frac{1}{4}$	73	72 $\frac{1}{4}$	6	Traitor's Head S. 56° W.
	8	53 6 $\frac{1}{2}$	20 57 22	13 36	18 32 $\frac{1}{2}$	168 58 $\frac{1}{8}$	71 $\frac{1}{2}$	70 $\frac{3}{4}$	3	Traitor's Head S. 41° W.
			Noon.	52 40 $\frac{1}{8}$	18 33 $\frac{1}{2}$		72 $\frac{1}{4}$	72 $\frac{3}{8}$		
♂ — 31.	16	27 19 $\frac{1}{2}$	4 32 0 $\frac{1}{2}$	13 31 $\frac{5}{6}$	18 30	169 5 $\frac{3}{4}$	75	76 $\frac{1}{2}$	6	Traitor's Head S. 12° W. distant about 7 leagues.
	7	40 48	19 44 38	17 10 $\frac{1}{3}$	18 23	168 54 $\frac{3}{4}$	74	73 $\frac{1}{4}$	6	
	7	46 45	19 50 41 $\frac{1}{2}$	18 26 $\frac{1}{3}$	18 23	168 56 $\frac{1}{8}$	74	73 $\frac{1}{4}$	3	
♂ — 31.	7	59 22	20 3 10 $\frac{1}{2}$	21 1 $\frac{2}{3}$	18 23	168 53	74	73 $\frac{1}{4}$	8	
	9	56 20	22 0 20	42 46 $\frac{1}{3}$	18 22	168 54 $\frac{3}{4}$	74	76	6	
			Noon.	53 7 $\frac{1}{4}$	18 21		75	81		
♂ — 31.	16	46 55	4 50 37 $\frac{1}{2}$	9 40 $\frac{1}{12}$	18 24	168 53 $\frac{1}{2}$	75	74 $\frac{1}{2}$	6	
	8	37 10	20 39 48	28 32 $\frac{2}{3}$	18 24 $\frac{2}{3}$	168 38 $\frac{7}{8}$	74	75 $\frac{1}{4}$	8	
	8	42 55	20 45 24	29 39 $\frac{7}{8}$	18 24 $\frac{2}{3}$	168 35 $\frac{1}{4}$	74	75 $\frac{1}{4}$	8	
D Aug. 1.			Noon.	53 10 $\frac{1}{4}$	18 32 $\frac{1}{3}$		74	73 $\frac{1}{3}$		Erramanga from S. 12° W. to S. 57° E.
♂ — 2.	16	23 42	4 25 34	14 58 $\frac{1}{4}$	18 46 $\frac{2}{3}$	168 28	75	76 $\frac{1}{4}$	6	Erramanga from N. 8° E. to S 12° E.
	8	51 25 $\frac{1}{2}$	20 52 52	31 3	18 45 $\frac{1}{2}$	168 23 $\frac{1}{8}$	75	76	8	Off Traitor's Head.
	8	58 4	20 59 30 $\frac{1}{2}$	32 19 $\frac{3}{8}$	18 45 $\frac{1}{2}$	168 23 $\frac{1}{8}$	75	76	8	
♂ — 2.			Noon.	53 12 $\frac{1}{4}$	18 46 $\frac{1}{8}$		78	78 $\frac{1}{3}$		
	16	47 46	4 49 30	9 58 $\frac{1}{12}$	18 44	168 28	80	78	6	Erramanga from N. 36° E. to S. 12° E.
	8	42 28	20 45 36 $\frac{1}{2}$	29 52	18 38	168 48	75	73	8	Traitor's Head S. 16° W. and the land from S. 80° W. to S. 16° E.
♂ — 3.	8	51 40	20 54 36 $\frac{1}{2}$	31 36 $\frac{1}{4}$	18 38	168 47 $\frac{3}{8}$	75	73	8	Erramanga from S. 7. W. to S. 18° E.
			Noon.	53 37 $\frac{1}{3}$	18 36 $\frac{1}{2}$		76 $\frac{1}{2}$	74		
	15	49 58	3 52 37 $\frac{1}{2}$	22 10 $\frac{5}{8}$	18 41	168 43 $\frac{3}{4}$	78	74 $\frac{1}{4}$	6	

1774.	Time by Watch K.			Apparent Time.	Altitude of the Sun's L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	'	"	H	'	"	'	A.	B.		
8 Aug. 3.	8	10	35	20 12 55 $\frac{1}{2}$	23 24 $\frac{1}{2}$	18 43 $\frac{1}{2}$	168 40 $\frac{1}{8}$	75	74 $\frac{1}{4}$	6	At anchor in the Bay N. of Traitor's Head.
8 18 10				20 20 32	24 57 $\frac{1}{2}$	18 43 $\frac{1}{2}$	168 40 $\frac{1}{2}$	75	74 $\frac{1}{4}$	6	
4 — 4.	Noon.				53 46 $\frac{1}{8}$	18 43 $\frac{1}{2}$		76 $\frac{1}{3}$	78		East end of Tanna S. 18° E. Traitor's Head N. 70° W.
15 20 4				3 22 58 $\frac{1}{2}$	28 18	18 44 $\frac{2}{3}$	168 48 $\frac{7}{8}$	78 $\frac{1}{3}$	77 $\frac{1}{2}$	6	
7 7 4				19 10 31	9 57 $\frac{4}{5}$	19 26 $\frac{1}{2}$	168 58 $\frac{1}{2}$	75	73 $\frac{1}{3}$	6	Off the entrance into Port Resolution.
8 — 5.	10	10	30 $\frac{1}{2}$		45 4 $\frac{5}{8}$	19 32 $\frac{1}{2}$		73 $\frac{1}{4}$	73	5	In Port Resolution.
11 44 20					53 21 $\frac{1}{2}$			73 $\frac{1}{2}$	74 $\frac{1}{4}$	3	
6 — 6.	I carried the Watch on shore at Port Resolution, in the island of Tanna, and noted the times of equal altitudes of the sun by it every day the weather would permit until the 19th (see p. 97). From these observations it appeared that the Watch was now gaining 13",938 a day on mean time, and this rate being 2",105 different from that which had been allowed, would, it is plain, cause a very considerable error in the situation of Aurora and the lands we first fell in with, as the relative situations of the several points had been determined by it. To avoid this, I computed the situations of the ship every day at noon, from our making Aurora to arriving at this place; and from thence corrected those of the several points of land which had before been settled by the Watch, according to the rate it was now going at, and on supposition that the longitude of Port Resolution is 168° 58' 8 $\frac{1}{2}$ ", which is what the Watch gave it at its Point Venus rate: And as I computed the situations of the ship, and all lands seen after leaving Port Resolution on the same suppositions, it is obvious that I had only to determine the absolute error of the Watch at that place, and the true situations of all the other points would follow. This error I found to be 0° 42' 57" too little, by a mean of 85 sets of observations of the moon's distance from the sun and stars; each set being the mean of from three to twelve single observations: And, in order to try whether the Watch had kept pretty near this rate all the time we were amongst these lands, I compared it with a mean of 32 sets of observations at Port Sandwich, with a mean of 48 sets at Pudyoua, or Observatory Isle, where I observed the solar eclipse, and with 48 more at Botany Island; and its error at none of these places differed quite 3' from the above. On the 19th, in the morning, we left Port Resolution.										
6 — 20.	7	26	10	19 30 58 $\frac{1}{2}$	16 27 $\frac{1}{2}$	19 24 $\frac{1}{3}$	169 32	71 $\frac{1}{2}$	71 $\frac{1}{2}$	6	Irraname S. 45° E.
6 — 21.	Noon.				58 3	19 33 $\frac{2}{3}$		72	73 $\frac{1}{3}$		Irraname N. 74° E.
17 1 28 $\frac{1}{2}$				5 3 35	8 44 $\frac{1}{4}$	19 39 $\frac{1}{2}$	168 52 $\frac{1}{8}$		72	6	Enatum S. 12° E.
7 19 19				19 18 44	14 7 $\frac{3}{8}$	18 38	168 11 $\frac{1}{4}$	70 $\frac{1}{2}$	70 $\frac{1}{4}$	6	Erramanga from S. 59° E. to N. 76° E.
6 — 22.	Noon.				59 38 $\frac{1}{4}$	18 18 $\frac{3}{5}$		72 $\frac{1}{2}$	75 $\frac{1}{3}$		Traitor's Head S. 66° E.
16 2 8 $\frac{2}{3}$				4 0 8	23 31 $\frac{1}{2}$	18 1 $\frac{1}{2}$	167 50 $\frac{3}{8}$	73 $\frac{1}{4}$	74	6	Sandwich Island from N. 32° E. to N. 55° W.

ON BOARD THE RESOLUTION.

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1774.	Time by Watch K.		Apparent Time.	Altitude of the Sun's L. L.	Latitude South.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	M					A.	B.		
D Aug. 22.	8	0	58 $\frac{1}{2}$	19 55 34 $\frac{1}{2}$	23 7 $\frac{1}{2}$	16 46	166 58 $\frac{3}{8}$			6 } Mallicola from N. 36°
	8	7	0	20 1 40	24 28 $\frac{5}{8}$	16 46 $\frac{1}{2}$	167 1 $\frac{5}{8}$			6 } E. to N. 35° W.
8 — 23.			Noon.	61 53 $\frac{7}{8}$	16 23 $\frac{1}{2}$		74 $\frac{1}{2}$	73 $\frac{2}{3}$		6 } Mallicola from S. 35°
	7	25	32	19 19 4	15 17 $\frac{1}{2}$	15 47 $\frac{1}{2}$	166 43 $\frac{1}{2}$	76 $\frac{1}{2}$		4 } Cloudy.
	8	53	51 $\frac{1}{2}$	20 47 42	35 9 $\frac{2}{3}$	15 40 $\frac{1}{2}$	166 47 $\frac{1}{2}$	76 $\frac{1}{2}$	78 $\frac{1}{2}$	6 } Off Tiera del Espiritu
8 — 24.			Noon.	63 14 $\frac{1}{2}$	15 23 $\frac{1}{2}$		77 $\frac{1}{2}$	81		6 } Sancto.
	16	49	32	4 43 6	15 1 $\frac{7}{8}$	15 7 $\frac{1}{2}$	166 42 $\frac{7}{8}$	79	80 $\frac{1}{2}$	6 } Cape Quiros N. 50° W.
	9	27	32	21 20 7	42 30 $\frac{2}{3}$	14 54 $\frac{1}{2}$	166 28	79 $\frac{1}{2}$		6 } Cape Quiros East.
4 — 25.			Noon.	64 2 $\frac{1}{2}$	14 55 $\frac{1}{2}$		79 $\frac{1}{2}$	81 $\frac{1}{2}$		6 } C. Cumberland N. 66° W.
	14	16	31	2 8 44	48 51 $\frac{5}{8}$	14 53 $\frac{1}{2}$	166 22 $\frac{1}{2}$	81		6 } Cape Quiros N. 86° E.
	7	52	49	19 44 54 $\frac{1}{2}$	21 39 $\frac{1}{2}$	15 6 $\frac{1}{2}$	166 20 $\frac{1}{2}$	77 $\frac{1}{2}$	76 $\frac{1}{2}$	6 } C. Cumberland N. 52° W.
	7	56	38	19 48 56	22 34 $\frac{7}{8}$	15 6 $\frac{1}{2}$	166 23 $\frac{1}{2}$	77 $\frac{1}{2}$	76 $\frac{1}{2}$	6 } Cape Quiros N. 48°
8 — 26.			Noon.	64 13 $\frac{3}{8}$	15 5		78 $\frac{1}{2}$	80 $\frac{1}{2}$		4 } W.
	16	32	54	4 25 2	19 23 $\frac{3}{8}$	15 10	166 20 $\frac{1}{2}$	81		6 } In the bottom of the
	7	25	12	19 16 52	15 24 $\frac{1}{2}$	14 45	166 12 $\frac{3}{8}$	76 $\frac{1}{2}$	74 $\frac{1}{2}$	10 } Bay of Philip & James.
	7	30	3	19 21 44	16 32 $\frac{2}{3}$	14 45	166 12 $\frac{3}{8}$	76 $\frac{1}{2}$	74 $\frac{1}{2}$	4 } Cape Quiros S. 68° $\frac{1}{2}$ E.
h — 27.			Noon.	65 0 $\frac{1}{2}$	14 39 $\frac{1}{2}$		77 $\frac{1}{2}$			4 } C. Cumberland N. 60° W.
	15	8	22	2 59 38 $\frac{1}{2}$	38 54 $\frac{1}{2}$	14 37	166 6 $\frac{1}{2}$	78	79 $\frac{1}{2}$	6 } C. Quiros S. 68° $\frac{1}{2}$ E.
	7	43	11	19 33 31 $\frac{1}{2}$	19 22 $\frac{3}{4}$	14 47 $\frac{1}{2}$	165 52 $\frac{1}{2}$	77 $\frac{1}{2}$	78 $\frac{1}{2}$	6 } C. Cumberland S. 88° W.
	7	49	39	19 39 58 $\frac{1}{2}$	20 52	14 47 $\frac{1}{2}$	165 52	77 $\frac{1}{2}$	78 $\frac{1}{2}$	6 } Ditto S. 36° W.
o — 28.			Noon.	65 10 $\frac{1}{2}$	14 50 $\frac{1}{2}$		78 $\frac{1}{2}$	78 $\frac{1}{2}$		6 } Ditto N. 40° E.
	17	3	32	4 54 13 $\frac{1}{2}$	12 58 $\frac{1}{2}$	14 48 $\frac{2}{3}$	165 58 $\frac{1}{2}$	80	82 $\frac{1}{2}$	6 } Ditto, N. 26° E.
	7	50	37	19 40 45 $\frac{1}{2}$	21 7 $\frac{3}{8}$	14 57 $\frac{1}{2}$	165 50 $\frac{3}{8}$	80 $\frac{1}{2}$	78	8 } Ditto, N. 26° E.
	7	56	58 $\frac{1}{2}$	19 47 14 $\frac{1}{2}$	22 37 $\frac{3}{4}$	14 57 $\frac{1}{2}$	165 50 $\frac{1}{2}$	80 $\frac{1}{2}$	78	8 } Ditto, N. 16° E.
D — 29.			Noon.	65 23 $\frac{1}{2}$	14 58 $\frac{2}{3}$		79 $\frac{2}{3}$	80		8 } Ditto, N. 19° E.
	7	35	6	19 24 54 $\frac{1}{2}$	17 27 $\frac{1}{8}$	15 24 $\frac{5}{8}$	165 43 $\frac{1}{2}$	78	78	6 } Off the West side of
8 — 30.			Noon.	65 23 $\frac{1}{2}$	15 19 $\frac{7}{8}$		79	79		6 } Quiros' Tiera del
	15	0	51	2 52 14 $\frac{1}{2}$	40 41 $\frac{1}{2}$	15 21 $\frac{1}{2}$	166 6 $\frac{1}{2}$	78 $\frac{1}{2}$	79	6 } Elpiritu Sancto.
	17	5	38 $\frac{1}{2}$	4 56 29 $\frac{1}{2}$	12 31 $\frac{1}{2}$	15 23 $\frac{1}{2}$	165 57 $\frac{1}{2}$	78 $\frac{1}{2}$	79	6 }
	7	58	35	19 49 42 $\frac{1}{2}$	23 12 $\frac{1}{2}$	15 43 $\frac{5}{8}$	166 2 $\frac{5}{8}$	76 $\frac{1}{2}$	76	6 }
8 — 31.			Noon.	65 20 $\frac{1}{2}$	15 45		77 $\frac{1}{2}$	77		6 } Cape Lisburne N. 52° E.
	15	19	59	3 12 15 $\frac{1}{2}$	36 20 $\frac{1}{2}$	15 42 $\frac{5}{8}$	166 18 $\frac{1}{2}$	79		6 } Bartholomew Isle N. 70° E.
	9	9	57	20 59 10	38 39 $\frac{5}{8}$	16 26	165 32 $\frac{3}{8}$	74 $\frac{1}{2}$	75	8 }
	9	52	17	21 41 36	47 30 $\frac{3}{4}$	16 27 $\frac{5}{8}$	165 33 $\frac{1}{2}$			6 }
4 Sept. 1.			Noon.	64 53 $\frac{1}{2}$	16 33 $\frac{7}{8}$		76	75		6 }
	7	13	42	18 59 54 $\frac{1}{2}$	11 28 $\frac{1}{2}$	17 46	164 46 $\frac{3}{8}$	74 $\frac{1}{2}$	74 $\frac{1}{2}$	6 }
8 — 2.			Noon.	63 42 $\frac{1}{2}$	18 6 $\frac{1}{8}$		75 $\frac{2}{3}$	76 $\frac{1}{2}$		6 }
	16	44	29	4 30 6 $\frac{1}{2}$	18 16 $\frac{1}{2}$	18 21	164 37	75 $\frac{1}{2}$	76	6 }
	9	0	26	20 44 20	34 44 $\frac{1}{2}$	19 0 $\frac{2}{3}$	164 10 $\frac{1}{2}$	74 $\frac{1}{2}$	71 $\frac{1}{2}$	5 } Very cloudy.

1774.	Time by Watch K.			Apparent Time.	Altitude of the $\odot$'s L. L.		Latitude S.	Longitude East by K.		Thermom.		No. of Obs.	Remarks.
	H	M	S	H	°	'		°	'	A.	B.		
h Sept. 3.	16	12	13 $\frac{1}{2}$	3 56 1	25	51 $\frac{2}{3}$	19 12 $\frac{1}{3}$	164	8 $\frac{1}{2}$	74	74	9	
o — 4.	7	27	23 $\frac{1}{2}$	19 10 50	13	46 $\frac{5}{6}$	19 50	164	2 $\frac{3}{8}$	73	73	6	
				Noon.	62	33 $\frac{3}{8}$	19 59 $\frac{3}{4}$			74 $\frac{3}{4}$	74		
	15	43	48	3 27 14 $\frac{1}{2}$	32	1 $\frac{2}{3}$	20 5 $\frac{2}{3}$	164	2 $\frac{1}{8}$	74 $\frac{1}{4}$	74 $\frac{1}{2}$	4	Cape Colenet S. 41° E. N. Point of Balade S. 68° W.
	8	38	49 $\frac{1}{2}$		29	48 $\frac{1}{3}$						10	Very cloudy.
D — 5.				Noon.	62	38 $\frac{1}{2}$	20 16 $\frac{1}{4}$			75 $\frac{1}{4}$	74		Dollond's Quadrant. Ramsden's ditto.
					62	39 $\frac{1}{4}$	20 16						
See pages 101 to 104 for Observations made on board the ship, at anchor, off Pudyoua.													
D — 12.	10	26	14 $\frac{1}{2}$	22 9 48	53	41 $\frac{2}{3}$	20 2	163	50 $\frac{1}{2}$	75	76 $\frac{2}{3}$	6	Pudyoua Isle S. 21° W.
d — 13.	15	13	13	2 55 34 $\frac{1}{2}$	40	40 $\frac{2}{3}$	19 47	163	31 $\frac{3}{8}$			8	
	15	20	24 $\frac{1}{2}$	3 2 49 $\frac{1}{2}$	39	6 $\frac{1}{3}$	19 47	163	32 $\frac{1}{8}$			10	
g — 14.				Noon.	66	51 $\frac{7}{8}$	19 28 $\frac{1}{5}$			75	76 $\frac{1}{2}$		
	16	26	58	4 8 25	24	44 $\frac{3}{5}$	19 18	163	16	75 $\frac{1}{2}$	79	6	
	16	33	6	4 14 29 $\frac{1}{2}$	23	21 $\frac{1}{5}$	19 18	163	15	75 $\frac{1}{2}$	79	3	
	7	13	49	18 55 35	11	52 $\frac{3}{4}$	19 9 $\frac{5}{6}$	163	18 $\frac{3}{8}$	76	74	6	
u — 15.				Noon.	67	27 $\frac{1}{8}$	19 15 $\frac{3}{4}$			78 $\frac{1}{2}$	80		
	15	20	11	3 2 5 $\frac{1}{2}$	39	48 $\frac{4}{5}$	19 18	163	21 $\frac{1}{4}$	80	83	4	
	15	25	37	3 7 36	38	36 $\frac{1}{6}$	19 18	163	22 $\frac{3}{8}$	80	83	7	Off the reefs which lie
	15	30	48	3 12 46	37	27 $\frac{2}{3}$	19 18	163	22 $\frac{1}{4}$	80	83	5	N. of New Caledonia.
	7	25	4	19 7 32	14	45 $\frac{3}{4}$	19 33	163	28 $\frac{1}{2}$	77	76	6	
g — 16.				Noon.	67	31 $\frac{1}{2}$	19 34 $\frac{2}{3}$			77 $\frac{3}{4}$	77 $\frac{1}{4}$		
	16	31	23	4 14 46	23	31 $\frac{1}{3}$	19 34	163	41 $\frac{3}{8}$	78	80 $\frac{1}{2}$	6	
	8	42	3	20 26 53 $\frac{1}{2}$	33	3 $\frac{1}{6}$	19 49	164	2 $\frac{1}{8}$	76 $\frac{1}{2}$	76 $\frac{1}{2}$	6	
h — 17.				Noon.	67	35 $\frac{5}{8}$	19 53 $\frac{3}{4}$			77 $\frac{1}{2}$	77 $\frac{1}{4}$		
	16	42	1	4 27 8	20	44 $\frac{5}{6}$	19 59	164	5 $\frac{1}{4}$	77 $\frac{1}{2}$	76 $\frac{1}{4}$	6	
	8	2	37		24	19				76 $\frac{1}{2}$	75 $\frac{1}{4}$	3	Very cloudy.
o — 18.				Noon.	67	48 $\frac{1}{4}$	20 4 $\frac{1}{10}$			77 $\frac{3}{4}$	79		
D — 19.	7	26	3	19 15 35	17	4 $\frac{1}{6}$	20 25	165	7 $\frac{1}{4}$	74 $\frac{1}{4}$	73	6	
	8	39	22 $\frac{1}{2}$	20 28 46 $\frac{1}{2}$	33	48 $\frac{1}{2}$	20 29	165	5	75	75	5	
d — 20.				Noon.	67	58 $\frac{5}{6}$	20 41 $\frac{1}{2}$			74 $\frac{1}{2}$	73 $\frac{1}{2}$		Off New Caledonia.
	15	51	25	3 40 56	31	33 $\frac{7}{8}$	20 50 $\frac{1}{2}$	165	6 $\frac{1}{2}$	74 $\frac{3}{4}$	73	6	
	7	0	25	18 50 56	11	27 $\frac{1}{2}$	20 52	165	20 $\frac{1}{4}$	73 $\frac{1}{2}$	71	6	
g — 21.				Noon.	68	7 $\frac{3}{4}$	20 54 $\frac{1}{2}$			74	73 $\frac{1}{4}$		The Point above Cape Colenet S. 89 $\frac{1}{2}$ ° W.
	16	12	33	4 3 38	26	33 $\frac{1}{3}$	20 57 $\frac{1}{6}$	165	28 $\frac{1}{8}$	74 $\frac{1}{4}$	73 $\frac{1}{4}$	6	The above Point N. 83° W.
	7	12	39	19 5 32	14	56 $\frac{1}{2}$	21 12 $\frac{5}{6}$	165	54 $\frac{1}{2}$	73 $\frac{1}{2}$	71 $\frac{1}{2}$	6	
u — 22.				Noon.	68	0	21 25 $\frac{3}{5}$			74 $\frac{1}{2}$	73 $\frac{1}{2}$		New Caledonia from N. 88° W. to S. 36° E.
	16	24	13	4 17 55	23	19 $\frac{2}{3}$	21 37 $\frac{1}{6}$	166	5 $\frac{5}{8}$	74	72 $\frac{1}{2}$	6	
	7	57	56	19 52 40	25	47 $\frac{1}{2}$	21 51 $\frac{1}{3}$	166	20 $\frac{1}{8}$	72 $\frac{1}{2}$	71	6	Q. Charlotte's Fore- land S. 28° E.
	9	29	59	21 24 44	46	7 $\frac{1}{2}$	21 51	166	20 $\frac{1}{4}$			6	Ditto, S. 25° E.
g — 23.				Noon.	67	55 $\frac{1}{2}$	21 53 $\frac{1}{2}$			73 $\frac{1}{2}$	73		Ditto, S. 23° E.

ON BOARD THE RESOLUTION.

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1774.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude S.	Longitude East by K.	Thermom.		Remarks.
	H	"	H	°	°	°	A.	B.	
♀ Sept. 23.	16	3 20 $\frac{1}{2}$	3 58 40	27 47	22 0 $\frac{1}{2}$	166 28 $\frac{1}{2}$	74	73 $\frac{1}{2}$	6 { Q. Charlotte's Foreland S. 4 $\frac{1}{2}$ ° E. & C. Coronation S. 52° W.
	7	50 25	19 47 0	24 39	21 57 $\frac{3}{4}$	166 46 $\frac{1}{8}$	72 $\frac{1}{4}$	72	6
♂ — 24.			Noon.	68 13	21 59 $\frac{1}{2}$		74 $\frac{1}{2}$	73	{ Q. Charlotte's Foreland S. 26° W.
	14	51 50	2 48 2 $\frac{1}{2}$	43 33 $\frac{1}{2}$	22 4	166 40 $\frac{1}{2}$	73 $\frac{1}{2}$	74	6
	7	9 56	19 6 7	15 24 $\frac{2}{3}$	22 8	166 38 $\frac{1}{2}$	73	71 $\frac{1}{2}$	5
☉ — 25.			Noon.	68 25 $\frac{3}{4}$	22 10 $\frac{1}{2}$		74 $\frac{1}{2}$	73 $\frac{1}{2}$	{ C. Coronation N. 78° W. & Q. Char. Foreland S. 37° W.
	16	9 38	4 5 38	26 27 $\frac{2}{3}$	22 20	166 34 $\frac{1}{2}$	75	74 $\frac{1}{2}$	6
	7	13 53 $\frac{1}{2}$	19 10 18 $\frac{1}{2}$	16 31 $\frac{1}{2}$	22 9 $\frac{1}{2}$	166 40 $\frac{1}{2}$	73	72	3
☽ — 26.			Noon.	68 43 $\frac{1}{6}$	22 16		73 $\frac{3}{4}$	73 $\frac{3}{4}$	{ Isle of Pines S. 13° $\frac{1}{2}$ ° E.
	16	22 57	4 20 32	23 14	22 20 $\frac{3}{4}$	166 57 $\frac{1}{4}$	76	73 $\frac{3}{4}$	6 { Cape Coronation N. 76 $\frac{1}{2}$ ° W. Isle of Pines S. 1° E.
	8	59 19 $\frac{1}{2}$	20 57 32	40 48 $\frac{1}{6}$	22 34 $\frac{1}{2}$	167 5 $\frac{1}{2}$	72	69	4
♂ — 27.			Noon.	68 50 $\frac{1}{2}$	22 32 $\frac{1}{2}$		70 $\frac{1}{2}$	68 $\frac{3}{4}$	{ Isle of Pines S. 53° W.
	15	55 17 $\frac{1}{2}$	3 53 42 $\frac{1}{2}$	29 27 $\frac{1}{4}$	22 32 $\frac{1}{2}$	167 8 $\frac{1}{2}$	71 $\frac{1}{2}$	69	6 { Ditto, S. 48° W.
	7	54 1	19 52 28	26 22	22 49 $\frac{1}{2}$	167 7 $\frac{1}{2}$	68 $\frac{1}{2}$	69	6
♂ — 28.			Noon.	69 1 $\frac{1}{2}$	22 44 $\frac{1}{2}$		71	71	{ Ditto, N. 45° E.
	15	11 18	3 7 9 $\frac{1}{2}$	39 57 $\frac{1}{2}$	22 43 $\frac{1}{2}$	166 28 $\frac{3}{4}$	71	69 $\frac{1}{2}$	6 { Q. Charlotte's Foreland N. 16° W.
	8	5 35		28 44 $\frac{1}{2}$					6
	9	6 8		42 16	22 29 $\frac{1}{2}$		71	73	6
☽ — 29.	Dollond's Qu. Ramfden's Q.		Noon. {	69 42 $\frac{5}{8}$	22 26 $\frac{3}{4}$	{	72 $\frac{1}{2}$	74	{ At anchor off Botany Island.
				69 42 $\frac{1}{2}$	22 26 $\frac{2}{3}$				
	14	12 32	2 8 40	52 42 $\frac{1}{2}$	22 26 $\frac{2}{3}$	166 31	73 $\frac{1}{2}$	75	6
	16	22 49	4 18 54 $\frac{1}{2}$	24 3 $\frac{5}{8}$	22 26 $\frac{2}{3}$	166 33 $\frac{1}{2}$	75	74 $\frac{1}{2}$	6
♀ — 30.			Noon.	69 58 $\frac{3}{4}$	22 34 $\frac{1}{2}$		74 $\frac{1}{2}$	73	
	16	8 17	4 4 56	27 22 $\frac{2}{3}$	22 40	166 37 $\frac{5}{8}$	76	75 $\frac{1}{2}$	6
	7	55 1 $\frac{1}{2}$	19 53 19	27 3 $\frac{1}{2}$	22 51 $\frac{1}{6}$	167 1 $\frac{3}{8}$	71 $\frac{1}{2}$	69	6
♂ Oct. 1.			Noon.	69 59 $\frac{5}{8}$	22 56 $\frac{1}{2}$		72	70 $\frac{3}{4}$	
	16	6 54	48 53 $\frac{1}{2}$	26 24 $\frac{4}{5}$	23 2 $\frac{2}{3}$	167 56 $\frac{1}{2}$	73 $\frac{1}{2}$	69 $\frac{1}{2}$	6
	7	12 36	19 16 58	18 52	23 17 $\frac{1}{2}$	168 31 $\frac{1}{2}$	69 $\frac{1}{2}$	66	6
	7	21 36	19 25 56 $\frac{1}{2}$	20 53 $\frac{7}{8}$	23 17 $\frac{1}{2}$	168 31	69 $\frac{1}{2}$	66	6
☉ — 2.			Noon.	70 0	23 19 $\frac{1}{2}$		69 $\frac{1}{2}$	66 $\frac{1}{2}$	
	16	7 25	4 13 34 $\frac{1}{2}$	25 37 $\frac{2}{3}$	23 19 $\frac{2}{3}$	168 58	71	69 $\frac{1}{2}$	6
	9	53 38	22 1 0	54 49 $\frac{1}{2}$	23 55 $\frac{1}{2}$	169 15 $\frac{1}{2}$	69	67 $\frac{1}{2}$	6
☽ — 3.			Noon.	9 38 $\frac{1}{2}$	24 4 $\frac{1}{2}$		70 $\frac{1}{2}$	68 $\frac{1}{2}$	6
	15	41 8	3 50 38 $\frac{1}{2}$	30 48 $\frac{1}{2}$	24 19 $\frac{1}{2}$	169 47	70 $\frac{1}{2}$	68 $\frac{1}{2}$	6
	6	42 32	18 54 2	13 52 $\frac{1}{2}$	25 1 $\frac{1}{2}$	170 16 $\frac{1}{2}$	68	66	6
♂ — 4.			Noon.	68 37 $\frac{3}{4}$	25 28		68 $\frac{1}{2}$	69 $\frac{1}{2}$	
	15	50 59	4 4 10	27 36 $\frac{3}{8}$	25 42 $\frac{2}{3}$	170 41	69	69	5
	6	43 55	18 57 24	14 44 $\frac{1}{2}$	26 33 $\frac{1}{2}$	170 44 $\frac{7}{8}$	66	64 $\frac{1}{2}$	6
♂ — 5.			Noon.	67 36 $\frac{1}{4}$	26 53		67 $\frac{1}{2}$	64 $\frac{3}{4}$	
	15	49 49	4 3 48	27 44 $\frac{2}{3}$	27 13	170 52 $\frac{1}{2}$	68 $\frac{1}{2}$	65 $\frac{3}{4}$	6
	6	50 26	19 4 50 $\frac{1}{2}$	16 30	27 53	170 58 $\frac{1}{2}$	65	62	6
☽ — 6.			Noon.	67 0 $\frac{1}{4}$	27 52		66 $\frac{2}{3}$	65	

ASTRONOMICAL OBSERVATIONS

1774.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.	
	H	"					A.	B.			
4 Oct. 6.	16	0 34	4 15 0	25 22 $\frac{5}{8}$	27 52	170 58	69	68 $\frac{1}{2}$	6		
	6	47 57 $\frac{1}{2}$	19 2 5 $\frac{1}{2}$	16 6 $\frac{1}{4}$	27 52 $\frac{1}{3}$	170 52 $\frac{7}{8}$	66	63	6		
8 — 7.			Noon.	67 23	27 52 $\frac{1}{3}$		70	71	5		
	7	2 13 $\frac{1}{2}$	19 12 45 $\frac{1}{2}$	18 34 $\frac{1}{2}$	28 17	170 1 $\frac{3}{8}$	66	64 $\frac{1}{4}$	5		
h — 8.			Noon.	67 13 $\frac{5}{8}$	28 24 $\frac{4}{8}$		68	65 $\frac{1}{4}$	6		
	16	2 55	4 11 34 $\frac{1}{2}$	26 24	28 32 $\frac{1}{3}$	169 30	69 $\frac{3}{4}$	64 $\frac{1}{2}$	6		
	8	50 19	20 56 10 $\frac{1}{2}$	40 54 $\frac{1}{3}$	28 51 $\frac{1}{2}$	168 47 $\frac{7}{8}$		65	6		
o — 9.			Noon.	67 6 $\frac{2}{3}$	28 54 $\frac{4}{8}$		68	64 $\frac{1}{4}$	6		
	14	42 50	2 47 5	44 22 $\frac{2}{3}$	28 55	168 23 $\frac{1}{4}$	69	62 $\frac{1}{2}$	6		
	14	49 26	2 53 41	42 55 $\frac{1}{3}$	28 55	168 25 $\frac{1}{2}$	69	62 $\frac{1}{2}$	6		
	15	16 15 $\frac{1}{2}$	3 20 31	37 27	28 55	168 23 $\frac{1}{4}$	69	62 $\frac{1}{8}$	6		
	16	49 28 $\frac{1}{2}$	4 53 12	17 28 $\frac{5}{8}$	28 56	168 15 $\frac{1}{2}$	69	62 $\frac{1}{4}$	5		
	6	52 59	18 53 12	14 38	28 53	167 22 $\frac{5}{8}$	65 $\frac{1}{2}$	61 $\frac{3}{4}$	6	Norfolk Island S. 5 $\frac{1}{2}$ ° E.	
	9	46 24	21 46 48	51 16 $\frac{1}{4}$	28 54 $\frac{2}{3}$	167 25 $\frac{5}{8}$	66	62	6	Ditto, S. 17° W.	
D — 10.			Noon.	67 26 $\frac{1}{3}$	28 58		66 $\frac{1}{2}$	63 $\frac{3}{4}$		Ditto, S. 12° E.	
			Ramfden's Q.	67 27	28 57 $\frac{1}{3}$				8		
	16	30 18	4 30 28	22 36 $\frac{1}{4}$	29 0	167 21 $\frac{1}{4}$			5	Ditto, S. 11° W.	
	16	44 25	4 44 38 $\frac{1}{2}$	19 31 $\frac{1}{4}$	29 0	167 22 $\frac{1}{2}$			6	Ditto, N. 64° W.	
	7	18 8	19 18 46 $\frac{1}{2}$	20 23	29 5 $\frac{1}{3}$	167 28 $\frac{5}{8}$	65 $\frac{3}{4}$	65		Ditto, N. 4° W.	
8 — 11.			Noon.	67 26	29 21 $\frac{1}{8}$		69 $\frac{1}{4}$	66 $\frac{1}{2}$	6		
	14	51 34	2 51 4	43 48 $\frac{3}{8}$	29 29	167 11 $\frac{5}{8}$	69 $\frac{1}{2}$	64 $\frac{3}{4}$	8		
	14	59 2	2 58 42	42 14 $\frac{4}{8}$	29 29	167 14 $\frac{1}{4}$	69 $\frac{1}{2}$	64 $\frac{3}{4}$	6		
	7	5 46	19 4 22 $\frac{1}{2}$	17 23 $\frac{1}{8}$	30 35 $\frac{1}{2}$	166 57 $\frac{3}{4}$	66	63 $\frac{3}{4}$	6		
8 — 12.			Noon.	66 8 $\frac{1}{4}$	31 1 $\frac{1}{2}$		69 $\frac{1}{4}$	66 $\frac{1}{4}$	8		
	15	25 54	3 24 58	36 26 $\frac{1}{2}$	31 17 $\frac{1}{2}$	167 4 $\frac{7}{8}$	70 $\frac{1}{2}$	65 $\frac{1}{4}$	5		
	16	55 55	4 55 4	17 38 $\frac{1}{2}$	31 25 $\frac{1}{2}$	167 5 $\frac{7}{8}$	70 $\frac{1}{2}$	65	6		
	7	18 51	19 19 11	20 36 $\frac{1}{3}$	32 39 $\frac{1}{3}$	167 23 $\frac{1}{2}$	65 $\frac{3}{4}$	62			
14 — 13.			Noon.	64 37 $\frac{5}{8}$	32 54 $\frac{4}{8}$		68 $\frac{1}{4}$	65 $\frac{1}{4}$	6		
	15	46 15	3 48 2	31 34	33 4 $\frac{2}{3}$	167 45 $\frac{3}{8}$	70	63	6		
	15	52 37	3 54 36	30 14 $\frac{2}{3}$	33 4 $\frac{2}{3}$	167 48 $\frac{1}{2}$	70	63	6		
	7	14 18	19 18 32	20 35 $\frac{2}{3}$	33 43	168 22 $\frac{1}{4}$	66	61 $\frac{1}{4}$	6		
8 — 14.			Noon.	63 52 $\frac{1}{2}$	34 2 $\frac{1}{3}$		67 $\frac{1}{3}$	65 $\frac{1}{4}$	6		
	16	23 41	4 30 28	22 52 $\frac{1}{2}$	34 20 $\frac{5}{8}$	169 0	70 $\frac{1}{2}$	62 $\frac{1}{2}$	6		
	16	31 26	4 38 14 $\frac{1}{2}$	21 17 $\frac{1}{8}$	34 21	169 0 $\frac{1}{2}$	70 $\frac{3}{4}$	62 $\frac{1}{2}$	6		
	16	36 14	4 43 10	20 16 $\frac{5}{8}$	34 21	169 2 $\frac{5}{8}$	70 $\frac{3}{4}$	62 $\frac{1}{2}$	6		
	6	59 15	19 9 6 $\frac{1}{2}$	18 45 $\frac{2}{3}$	35 8 $\frac{1}{2}$	169 46 $\frac{5}{8}$	65	60	6		
h — 15.			Noon.	62 45	35 32		67 $\frac{1}{2}$	65 $\frac{1}{2}$	6		
	7	15 34	19 32 37 $\frac{1}{2}$	23 31 $\frac{5}{8}$	37 9 $\frac{1}{2}$	171 34 $\frac{3}{4}$	64	60 $\frac{3}{4}$	6	Very cloudy.	
o — 16			Noon.	61 4 $\frac{3}{8}$	37 34 $\frac{3}{4}$		66 $\frac{1}{2}$	63 $\frac{1}{2}$	6		
	11	55 41		60 52	37 34	☉ N. W. at 2d obs. Ship's course S. E. 5 $\frac{3}{4}$ miles an hour.				6	
	13	10 1		54 42 $\frac{2}{3}$						6	
	6	56 21	19 18 24	20 47	38 57 $\frac{1}{2}$	172 49 $\frac{3}{8}$	62 $\frac{1}{4}$	58	5	C. Egmont S. 17° E.	
	9	37 57	22 0 27 $\frac{1}{2}$	49 38 $\frac{1}{2}$	39 12 $\frac{1}{2}$	172 57			6	Ditto, S. 72° E.	
D — 17.			Noon.	59 37 $\frac{1}{3}$	39 24		64 $\frac{1}{4}$	59		Ditto, N. 33° E.	

1774.	Time by Watch K.		Apparent Time.		Altitude of the ☉'s L. L.		Latitude South.		Longitude East by K.		Thermom.		No. of Obs.	Remarks.	
	H	"	H	"	°	'	°	'	°	'	A.	B.			
Oct. 17.	These bearings of Cape Egmont are a little doubtful, as we could not be absolutely certain of the Cape Point, on account of the fog over the land.														
15 2 5 3 25 26 25 14 39 49 173 9 64 1/2 59 1/2 6	In Cook's Straits.														
8 — 18.	We got safe moored, the third time, in Queen Charlotte's Sound, New Zealand; and I got my Observatory and Instruments up on the 19th, but, on account of the bad weather, did not get equal altitudes of the Sun before the 22d, on which, and all future days, until November 5th, I compared the Watch with the Clock (see p. 112.). Hence it appeared, that the Watch was then gaining 12",576 a day on mean time, and that it was 12 h. 9' 38",86 too slow for mean time, at Queen Charlotte's Sound, on 1/2 October 22d, at noon. The Watch therefore places the Sound, this time, 173° 41' 28" 1/2 East of Greenwich; that is, it makes the difference of Longitude between this place and Point Venus, in Otaheite, 36° 43' 42" 1/4. I have here supposed the Watch to go at its Point Venus rate till August 7th, and after that time at its Tanna rate.														
If we allow the rate it went at, when at Greenwich, before the voyage, all the way from England, it will make the Sound 147° 34' 26" 1/2 East of Drake's Island, or 143° 18' 19" East of Greenwich. Lastly, if it be supposed to have gone at the rate it went at when here last time, (viz. gaining 9",091 a day on mean time) it ought to have been too slow for mean time, on 1/2 November 5th, 1774, by 12 h. 26' 14",2; but as it was only 12 h. 6' 43" too slow at that time, it will appear to have erred from itself 19' 31".2 = 4° 52' 48" 1/4 of longitude in one year all but a day.															
The following longitudes of the ship are computed on supposition that the Watch gains 12",576 a day on mean time, that it was 12 h. 6' 43" too slow for mean time, at Queen Charlotte's Sound, on 1/2 November 5th, at noon, and that the true longitude of the Sound is 174° 25' 1/3, which is what the mean of all my Observations make it.															
14 Nov. 10.	6	34	57	18	59	12	22	14 1/3	42	18 1/2	175	10	63	58	5
8 — 11.	Noon.			64	51	1 1/2	42	21 2/3	42	21 2/3	175	24	64 1/2	60	6
	14	18	8 1/2	2	43	13	47	9 1 1/2	42	22 1/6	175	24	66	62	6
	14	23	31	2	48	51 1/2	46	12 1/2	42	22 1/6	175	27 7/8	66	62	7
	15	33	40	3	58	53	33	42 1/4	42	22 2/3	175	26 1/2	67	62 1/3	5
	6	34	1	18	59	9 1/2	22	26 3/5	42	54 1/6	175	28 1/2	62 2/3	58	6
1/2 — 12.	Noon.			64	16	1 1/8	43	13 1/2	43	13 1/2	176	7 7/8	64 1/2	61 2/3	6
	15	45	3	4	12	42	31	14 2/3	43	27	176	7 7/8	65 3/4	64	6
	15	50	35	4	18	26 3/4	30	13 1 1/10	43	27	176	11	65 3/4	64	6
	6	24	17	18	55	0	21	56 1/3	44	7	176	58	62 2/3	54 3/4	6
14.	6	28	42	19	13	44	25	40	47	33	180	43	55 1/4	49 1/2	6
	9	32	41				54	2 1/2	{ 47 49 1/2	{ Ship's course S. E. by E. 4 miles an hour.	51	51	5		
8 — 15.	11	55	45				59	12 2/3			52	52	4		
	17	24	35 1/2	6	13	38	11	21 1/2	48	10	181	45 3/8	58	52	6
	6	8	12	19	1	28	23	48 5/8	49	12	182	52 1/4	53	47 1/4	6
16.	Noon.			58	58	5/8	49	33 1/2	49	33 1/2	184	6 1/2	53	50	6
	16	58	1 1/2	5	56	4	14	45 2/3	49	58 2/3	184	6 1/2	57 3/4	52	6

1774.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude South.	Longitude East by K.	Thermom.		Remarks.	
	H	"	H	°	°	°	A.	B.		
14 Nov. 17.	15	15	6	4 22 34½	29 40½	51 33½	186 33½	55½ 51	6	Foggy.
	5	36	22	18 51 16	22 40	52 31½	188 28½	50½ 47½	6	
♀ — 18.				Noon.	56 18½	52 44⅞		54 50½		
h — 19.				Noon.	55 34½	53 41⅞		55 49		
D — 21.	6	59	28	21 10 9⅓	42 10⅓	55 46⅔	202 37⅞	50½ 44	6	
♂ — 22.				Noon.	54 7¾	55 48⅓		52 44½		
	6	54	22	21 11 46½	42 35	55 42⅔	204 41	51 43½	6	
♀ — 23.				Noon.	54 26	55 42⅔		52 44½		
	13	20	39	3 39 4	36 8	55 42½	204 58	56 48½	5	
	6	40	34	21 6 34	42 12¼	55 33	206 56⅞	51 44	6	
14 — 24.				Noon.	54 48½	55 32⅓		52 46		
	6	30	13	21 13 8	43 20½	55 13⅙	211 18¼	50½ 43	6	
♀ — 25.				Noon.	55 23⅞	55 9⅓		52 45¼		
	12	57	19	3 45 58	35 41⅓	55 7⅝	212 46⅞	54½ 43⅓	6	
h — 26.				Noon.	55 37¾	55 6⅔		50¼ 43¼		
☉ — 27.				Noon.	55 52::	55 3		51 44½		
	13	17	59½	4 49 5	27 6⅞	55 2½	223 39	52½ 43½	6	
♀ — 30.				Noon.	55 54¼	55 31⅓		54¼ 47¼		
14 Dec. 1.	2	2	33		21 6⅓	55 12⅔	237 1¼	50½ 44	6	Very hazy, and a high sea.
	6	40	18		55 5⅔	54 53⅔	N. 13° E. at 1st Observat. Ship's course N. E. 5 miles an hour.			} Very foggy.
♀ — 2.	8	11	2		56 15¼				5	
h — 3.				Noon.	57 53⅔	54 0¼		52½ 45		
	2	38	17	19 15 28	28 38⅓	53 21	241 2⅓	49 40⅓	6	
☉ — 4.				Noon.	58 47⅞	53 15¼		56¼ 41¼		
	11	20	42	4 2 58½	34 51⅙	53 15⅙	242 27¼	58 41¼	6	
	2	29	53	19 19 58	29 24⅓	53 9½	244 30⅞	50¾ 41½	5	
	3	50	46½	20 42 22	41 29⅓	53 9	244 53⅓	52¼ 41¼	5	
D — 5.				Noon.	59 2¼	53 7⅞		56 43½		
	11	21	24		32 44½	53 6⅔	246 12¼	58¼	6	
♂ — 6.				Noon.	59 7⅞	53 10½		56¼ 43		
	11	58	22½		24 55⅔	53 12½		60⅓ 43	6	
	2	13	9½	19 32 37½	31 19⅙	53 17⅔	252 9⅞	48¼ 43½	6	
♀ — 7.				Noon.	59 17	53 19⅓		52 46½		
	10	4	26	3 27 48	40 13⅞	53 20⅙	253 11⅓	60⅓ 48	6	
	10	7	59	3 31 33¼	39 41½	53 20⅙	253 14⅓	60⅓ 48	2	
	11	23	37	4 47 34½	28 30¼	53 20⅔	253 20⅞	61 50	6	
	2	51	11	20 20 57	38 37⅞	53 29	254 54⅓	53⅓ 44½	6	
14 — 8.				Noon.	59 0½	53 30¼		62 47		
					58 59⅔	53 31½				
♀ — 9.				Noon.	59 0⅓	53 37⅓		63¼ 47¼		
	2	3	30	19 45 54	33 37⅞	53 50⅙	258 23⅞	53½ 44½	7	
h — 10.	0	26	59½	4 15 56	33 23⅞	53 46⅝	260 4⅞	59 44½	6	
☉ — 11.	10	4	23	4 11 26½	34 9⅓	53 29	264 46¼	60 44¼	6	
	2	50	50	21 8 17½	45 26⅞	53 26⅙	267 29⅞	53⅓ 44½	5	

ON BOARD THE RESOLUTION.

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1774.	Time by Watch K.			Apparent Time.	Altitude of the $\odot$'s L. L.		Latitude South.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	M	S	H	°	'			A.	B.		
D Dec. 12.				Noon.	59	28 $\frac{1}{2}$	53 24 $\frac{1}{2}$		61 $\frac{1}{2}$	44 $\frac{1}{2}$		
	8	43	40	3 5 5 $\frac{1}{2}$	43	46	53 22 $\frac{1}{2}$	268 31 $\frac{5}{8}$	64 $\frac{1}{2}$	47	8	
	8	52	48 $\frac{1}{2}$	3 14 32	42	27 $\frac{1}{2}$	53 22 $\frac{1}{2}$	268 36 $\frac{1}{8}$	64 $\frac{1}{2}$	47	8	
	10	17	12	4 39 14 $\frac{1}{2}$	30	6 $\frac{1}{8}$	53 22 $\frac{1}{2}$	268 41 $\frac{5}{8}$	68 $\frac{1}{2}$	46 $\frac{1}{2}$	6	
	2	17	39	20 43 33 $\frac{1}{2}$	42	13 $\frac{3}{8}$	53 23 $\frac{1}{2}$	269 46	58 $\frac{1}{2}$	44 $\frac{1}{2}$	6	
8 — 13.				Noon.	59	33 $\frac{7}{8}$	53 23 $\frac{1}{2}$		62 $\frac{1}{2}$	47		
	9	38	21	4 7 53 $\frac{1}{2}$	34	47 $\frac{3}{8}$	53 23 $\frac{5}{8}$	270 44 $\frac{7}{8}$	63 $\frac{1}{2}$	45 $\frac{1}{2}$	6	
	2	3	21	20 41 58	42	4 $\frac{1}{2}$	53 25	273 7 $\frac{1}{4}$	58	44 $\frac{1}{2}$	6	
8 — 14.				Noon.	59	36 $\frac{1}{4}$	53 25 $\frac{1}{2}$		62	46 $\frac{1}{2}$		
	10	39	1	5 22 4	23	50 $\frac{1}{2}$	53 26	274 17 $\frac{1}{2}$	67	45 $\frac{1}{2}$	5	
	1	37	26	20 27 58 $\frac{1}{2}$	40	5 $\frac{1}{8}$	53 29 $\frac{1}{2}$	276 16 $\frac{1}{8}$	56	45	6	
4 — 15.				Noon.	59	34 $\frac{1}{2}$	53 30 $\frac{1}{2}$		62 $\frac{1}{2}$	46 $\frac{1}{2}$		
	10	47	6 $\frac{1}{2}$	5 44 6	20	41 $\frac{1}{2}$	53 30 $\frac{1}{2}$	277 55 $\frac{1}{2}$	62 $\frac{1}{2}$	45 $\frac{1}{2}$	6	
	23	58	41	19 2 42 $\frac{1}{2}$	27	35 $\frac{1}{2}$	53 27 $\frac{1}{8}$	279 48 $\frac{1}{2}$	52	44	6	
8 — 16.				Noon.	59	41 $\frac{5}{8}$	53 26 $\frac{3}{4}$		62	46		
	9	32	4	4 41 41 $\frac{1}{2}$	29	55 $\frac{3}{8}$	53 25 $\frac{1}{2}$	281 16 $\frac{1}{4}$	62	46 $\frac{1}{2}$	6	
	1	26	0 $\frac{1}{2}$	20 43 3	42	19 $\frac{1}{2}$	53 25	283 14 $\frac{1}{8}$	62 $\frac{1}{2}$	45	6	
8 — 17.				Noon.	59	48 $\frac{3}{4}$	53 21 $\frac{7}{8}$		62 $\frac{1}{2}$	47		
	8	47	32	4 8 49 $\frac{1}{2}$	34	50 $\frac{3}{4}$	53 17 $\frac{3}{4}$	284 21 $\frac{1}{2}$	62 $\frac{1}{2}$	47	6	
	23	10	54 $\frac{1}{2}$	18 39 35	24	15 $\frac{1}{2}$	53 41 $\frac{2}{3}$	286 18 $\frac{3}{8}$			6	
	2	57	23		54	35 $\frac{3}{8}$	N. 17° E.	The Ship's course S. E. 6 $\frac{1}{2}$ miles an hour. The latitudes deduced were, 54° 13 $\frac{1}{2}$, and 54° 13 $\frac{1}{2}$.			5	
0 — 18.				Noon.	58	58 $\frac{1}{4}$	54 13 $\frac{7}{8}$					Cape Gloucester N. true.
	4	41	56		58	53 $\frac{1}{2}$						Cape Noir S. 62° E.
	6	29	57		51	30 $\frac{3}{8}$	N. 68° W.					Cape Noir S. 62° E.
	8	45	30	4 17 18 $\frac{1}{2}$	33	28 $\frac{1}{2}$	54 36 $\frac{1}{2}$	287 9 $\frac{1}{8}$		50	6	Cape Noir N. 2° W.
	22	13	42	17 50 44	17	37 $\frac{5}{8}$	55 13 $\frac{5}{8}$	288 34 $\frac{1}{2}$	54	45 $\frac{1}{2}$	5	Cape Defolation N. 4° E.
	0	59	36 $\frac{1}{2}$	20 38 42 $\frac{1}{2}$	41	9	55 17 $\frac{1}{2}$	289 6 $\frac{1}{4}$	59	46 $\frac{1}{2}$	6	C. Defolation N. 56° W. Gilbert's Isle N. 62° E.
D — 19				Noon.	57	54	55 20 $\frac{1}{2}$		64 $\frac{1}{2}$	50 $\frac{1}{2}$		Gilbert's Isle N. true.
	8	44	46	4 24 26 $\frac{1}{2}$	32	23	55 30 $\frac{1}{2}$	289 18 $\frac{1}{4}$	65 $\frac{1}{2}$	48	6	
	23	25	48	19 7 26 $\frac{1}{2}$	28	25 $\frac{1}{2}$	55 38 $\frac{3}{4}$	289 54 $\frac{1}{4}$	65 $\frac{1}{2}$	54	6	York Minster N. 17° E.
8 — 20.				Noon.	57	36	55 39 $\frac{1}{2}$		65 $\frac{1}{2}$	54		York Minster N. 6° W.
	8	32	21	4 15 2 $\frac{1}{2}$	33	43 $\frac{1}{2}$	55 31 $\frac{1}{8}$	290 15	68	53 $\frac{1}{2}$	6	
This evening we anchored in Christmas Sound, on the S. W. side of Terra del Fuego, where I found that the watch was gaining 12", 377 a day on mean time, which is so near what it was gaining at New Zealand, that I made no difference in the manner of computing the longitude of the ship by it. It made the longitude of Christmas Sound 290° 19' 41 $\frac{1}{2}$ East of Greenwich.												
8 — 28.	9	33	9	5 13 48	25	20 $\frac{3}{4}$	55 49 $\frac{1}{2}$	291 5 $\frac{1}{8}$			8	St. Ildefonso's Isles S. 40° to 50° W.
	0	50	57	20 39 1 $\frac{1}{2}$	40	50 $\frac{5}{8}$	55 56 $\frac{1}{2}$	293 6 $\frac{1}{4}$	58	49 $\frac{1}{2}$	7	C. Horne S. 63° W. about 6 miles off.

1774.	Time by Watch K.	Apparent Time.	Altitude of the ☉'s L. L.	Latitude South.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H "	H "	° '	° '	° '	A.	B.		
4 Dec. 29.		Noon.	57 21 $\frac{1}{2}$	55 43 $\frac{7}{8}$		64	52 $\frac{1}{2}$		{ Barnevelt's Isle S. 38° W. Evout's Isle N. 69° W.
	8 6 42	3 59 42	35 43 $\frac{1}{2}$	55 28	294 24 $\frac{1}{2}$	64 $\frac{1}{2}$	53	8	
	9 55 57	5 49 52	20 12 $\frac{1}{2}$	55 20	294 38 $\frac{1}{2}$	66	52 $\frac{3}{4}$	6	
	1 6 4	21 1 32	44 9 $\frac{1}{2}$	54 52 $\frac{1}{2}$	295 8 $\frac{3}{8}$	63	54	6	Succes Bay N. W.
8 — 30.		Noon.	58 8 $\frac{3}{8}$	54 53		65	56 $\frac{2}{3}$		{ Succes Bay S. 81° W. C. Diego N. 45° W. and C. St. Anthony N. 45° E.
	9 41 42	5 36 50	21 54 $\frac{1}{3}$	54 55	295 7 $\frac{1}{4}$	65	54	6	{ C. of Good Succes S. 36° W. C. St. Diego N. 13° W.
h — 31		Noon.	58 15	54 42 $\frac{1}{2}$		62	52 $\frac{1}{4}$		
	8 38 17	4 37 2	30 24 $\frac{7}{8}$	54 41	296 9 $\frac{1}{8}$	63 $\frac{1}{2}$	51 $\frac{1}{2}$	6	{ At anchor off New Year's Island.
	9 36 16	5 34 49	22 7 $\frac{1}{2}$	54 41	296 8 $\frac{5}{8}$	63 $\frac{1}{2}$	51 $\frac{1}{2}$	6	
	23 13 33	19 11 25 $\frac{1}{2}$	28 42 $\frac{2}{3}$	54 41	296 4 $\frac{3}{8}$	59 $\frac{1}{2}$	52	6	
			58 3	54 48 $\frac{1}{2}$	No dip.				{ In New Year's Har- bour, Staten Land.
1775. ☉ Jan. 1.		Noon.	58 12	54 40 $\frac{1}{2}$	Dip 3' 30"				{ Observed by C. Cook, on the N. E. point of New Year's Island.
	0 14 41	20 11 54	37 17 $\frac{1}{2}$	54 41	296 8 $\frac{1}{2}$	59 $\frac{1}{2}$	47	6	{ At anchor off New Year's Isles.
	2 26 7 $\frac{1}{2}$		53 21 $\frac{1}{2}$	54 41		56 $\frac{1}{2}$	47 $\frac{1}{2}$	5	
	6 40 36		46 42 $\frac{1}{2}$			64 $\frac{1}{2}$	49 $\frac{2}{3}$	2	
	6 52 14		45 12 $\frac{1}{2}$			64 $\frac{1}{2}$	49 $\frac{2}{3}$	5	
	8 45 16	4 42 13 $\frac{1}{2}$	29 32 $\frac{1}{2}$	54 41	296 6	67 $\frac{1}{2}$	51 $\frac{1}{2}$	6	
	22 22 18	18 20 3	21 13 $\frac{1}{8}$	54 46 $\frac{1}{3}$	296 22 $\frac{1}{2}$	57 $\frac{1}{2}$	49	5	{ C. St. Juan S. 54° W. distant about 5 miles.
	1 9 12 $\frac{1}{2}$	21 6 40	44 32 $\frac{4}{5}$	54 54	296 19 $\frac{7}{8}$			6	{ C. St. Bartholomew S. 59° W. C. S. Juan N.
8 — 3.		Noon.	57 47	54 55 $\frac{4}{5}$		44 $\frac{1}{2}$	52 $\frac{1}{2}$		C. St. Juan N. 2° W.
	7 36 55	3 34 24	39 3 $\frac{1}{2}$	54 53	296 22 $\frac{5}{8}$			4	Ditto N. 2° W.
	22 22 55 $\frac{1}{2}$	18 25 40	22 0 $\frac{3}{5}$	55 11 $\frac{1}{2}$	297 47 $\frac{1}{2}$	54 $\frac{2}{3}$	47	6	
8 — 4		Noon.	57 4 $\frac{1}{3}$	55 32 $\frac{2}{3}$		60	51		
	22 53 28	19 8 29 $\frac{1}{2}$	27 56	56 47 $\frac{5}{8}$	300 59 $\frac{1}{2}$	50	44	6	
11 — 5		Noon.	55 22 $\frac{1}{3}$	57 8 $\frac{1}{2}$		59	47		
	9 11 46	5 33 16	22 19 $\frac{3}{8}$	57 17 $\frac{1}{2}$	302 43 $\frac{1}{2}$	64	45 $\frac{1}{2}$	5	
	0 37 48 $\frac{1}{2}$	21 8 45 $\frac{1}{3}$	43 9 $\frac{1}{2}$	57 47	305 11 $\frac{5}{8}$	55 $\frac{1}{2}$	43	6	
8 — 6			53 59 $\frac{1}{8}$	57 53 $\frac{1}{3}$	Ship's course E. 6 miles an hour.				
	5 45 37 $\frac{1}{2}$		46 27 $\frac{1}{4}$						
	7 24 34	4 0 10	34 33 $\frac{2}{3}$	58 2	306 26 $\frac{1}{2}$	67 $\frac{1}{2}$	43	8	{ Cloudy. Bad horizon.
	10 30 29	19 9 11	27 52 $\frac{1}{2}$	57 20 $\frac{1}{3}$	307 16 $\frac{1}{2}$	47	40 $\frac{1}{2}$	8	
h — 7.		Noon.	55 16 $\frac{7}{8}$	57 0 $\frac{1}{8}$		61	40 $\frac{3}{4}$		
	7 50 50	4 28 44	30 53 $\frac{5}{8}$	56 37 $\frac{5}{8}$	307 8 $\frac{1}{2}$	62	43	6	
	23 24 30	20 4 50	35 35 $\frac{1}{3}$	55 14 $\frac{2}{3}$	307 54 $\frac{5}{8}$	51 $\frac{1}{2}$	44	6	
☉ — 8.		Noon.	57 0 $\frac{3}{4}$	55 8 $\frac{2}{3}$		61 $\frac{1}{2}$	49		
	7 31 16	4 14 28	32 58 $\frac{1}{2}$	55 4 $\frac{1}{3}$	308 37 $\frac{1}{2}$	67 $\frac{1}{2}$	50 $\frac{1}{2}$	6	
D — 9.		Noon.	56 49 $\frac{1}{2}$	55 11 $\frac{7}{8}$		63	43 $\frac{1}{2}$		

1775.	Time by Watch K.		Apparent Time.	Altitude of the Sun's L. L.	Latitude S.	Longitude East by K.		Thermom.		No. of Obs.	Remarks.
	H	M	H			°	'	A.	B.		
8 Jan. 10.			Noon.	57 17 $\frac{1}{2}$	54 35 $\frac{1}{2}$			66 $\frac{1}{2}$	45		Very cloudy.
	21	39	13	23 57 $\frac{3}{4}$	54 38 $\frac{1}{2}$	314	34 $\frac{1}{2}$	51 $\frac{1}{2}$	42 $\frac{1}{2}$	6	
8 — 11.			Noon.	57 7 $\frac{3}{8}$	54 36 $\frac{1}{2}$				47		
	7	4	18	32 43 $\frac{1}{2}$	54 35 $\frac{1}{2}$	315	47 $\frac{1}{2}$	69	45	6	
24 — 12.			Noon.	57 6 $\frac{1}{2}$	54 28 $\frac{1}{2}$			59 $\frac{1}{2}$	42 $\frac{1}{2}$		
6 — 14.			Noon.	57 18 $\frac{1}{2}$	53 56 $\frac{1}{2}$			61 $\frac{1}{2}$	37 $\frac{1}{2}$		
	6	47	5	32 13 $\frac{3}{4}$	53 57 $\frac{1}{2}$	320	53 $\frac{1}{2}$	61 $\frac{1}{2}$	37 $\frac{1}{2}$	6	Willis's Isle N. 83° E.
	7	47	29	23 22 $\frac{1}{2}$	53 57 $\frac{1}{2}$	320	54	62 $\frac{1}{2}$	37 $\frac{1}{2}$	4	
8 — 16.			Noon.	56 28 $\frac{1}{10}$	54 25 $\frac{1}{2}$			57 $\frac{1}{2}$	39 $\frac{1}{2}$		
	6	26	5	34 28 $\frac{1}{2}$	54 8 $\frac{1}{2}$	321	59 $\frac{1}{2}$			6	
	20	57	12	21 24 $\frac{1}{2}$	53 58	323	1 $\frac{1}{2}$	52	35 $\frac{1}{2}$	6	Poffession Bay S. 25° E.
8 — 17.			Noon.	56 41 $\frac{1}{2}$	54 0 $\frac{1}{2}$			61 $\frac{1}{2}$	39 $\frac{1}{2}$		C. Buller N. 85° W. Cape Saunders S. 85° E. and Poffession Bay S. by E. 5 miles.
	5	53	16 $\frac{1}{2}$	38 12 $\frac{1}{2}$	54 3 $\frac{1}{2}$	323	29 $\frac{1}{2}$	62	39 $\frac{1}{2}$	6	
	21	6	57	23 21 $\frac{1}{2}$	54 21	324	16 $\frac{1}{2}$	49 $\frac{1}{2}$	37 $\frac{1}{2}$	6	Cooper's Island S. 18° E. Cape Saunders N. 78° W.
8 — 18.			Noon.	56 0 $\frac{1}{2}$	54 30 $\frac{1}{2}$			62	43		
	5	59	17	36 32 $\frac{1}{2}$	54 35	324	34 $\frac{3}{8}$	66 $\frac{1}{2}$	41 $\frac{1}{2}$	6	Cooper's Island S. 2° W. Cape George S. 67° W.
	21	46	52	29 8 $\frac{1}{2}$	54 42 $\frac{1}{2}$	324	42 $\frac{1}{2}$	49 $\frac{1}{2}$	37 $\frac{1}{2}$	6	
24 — 19.			Noon.	55 35 $\frac{1}{2}$	54 42 $\frac{1}{2}$			60 $\frac{3}{4}$	45		Ditto, S. 53° W. C. Charlotte S. 49° W. A rock off Sandwich Bay S. 80° W.
	6	1	59	35 57 $\frac{1}{2}$	54 47 $\frac{1}{2}$	324	40 $\frac{1}{2}$	61	42	6	
	20	49	3	20 19	55 0 $\frac{1}{2}$	324	11 $\frac{1}{2}$	52	39	6	Cooper's Island N. 21° E. C. Disappoint. N. 57° W.
8 — 20.			Noon.	55 2 $\frac{1}{2}$	55 3 $\frac{1}{2}$			66	43		
	6	38	0	30 45	55 10 $\frac{1}{2}$	324	39	62 $\frac{1}{2}$	39	6	Pickergill's Island N. 59° W. C. Disappoint. N. 11° W.
	6	56	16	27 19 $\frac{1}{2}$	55 15	325	55 $\frac{1}{2}$	68	40	6	
8 — 25.				52 53 $\frac{3}{4}$	56 0 $\frac{7}{8}$	N. 78° W. at 2d Obs. Ship's course E. by S. 5 miles an hour.				5	The horizon bad.
				34 53 $\frac{1}{2}$						5	
	6	28	35	29 36	66 9 $\frac{1}{2}$	327	43 $\frac{1}{2}$			4	
	20	39	9	20 28 $\frac{1}{2}$	57 8 $\frac{1}{2}$	329	20	47 $\frac{1}{2}$	42 $\frac{1}{2}$	5	
	20	41	40	20 47	57 8 $\frac{1}{2}$	329	16	47 $\frac{1}{2}$	42 $\frac{1}{2}$	5	
24 — 26.			Noon.	51 4 $\frac{3}{4}$	57 38 $\frac{1}{2}$			62	41 $\frac{1}{2}$		
	20	48	8	21 28 $\frac{1}{2}$	59 15	329	21 $\frac{1}{2}$	49 $\frac{1}{2}$	39	7	Foggy.
8 — 27.				37 21 $\frac{1}{10}$	60 4 $\frac{1}{2}$	330	29 $\frac{1}{2}$	60 $\frac{1}{2}$	35 $\frac{1}{2}$	5	
6 — 28.			Noon.	48 7 $\frac{1}{2}$	60 5 $\frac{1}{2}$			63	37		Ditto.
	6	57	29 $\frac{1}{2}$	23 7	60 5 $\frac{1}{2}$	331	5	63 $\frac{1}{2}$	33 $\frac{1}{2}$	4	
8 — 29.			Noon.	47 55 $\frac{1}{2}$	60 1 $\frac{1}{2}$			64	39		Very cloudy.
8 — 31.			Noon.	48 12 $\frac{1}{2}$	59 12 $\frac{1}{2}$			61	37		Ditto.
	5	2	29	35 46 $\frac{1}{2}$	59 6	333	0 $\frac{1}{2}$	65	39 $\frac{1}{2}$	6	Thule S. S. W. 7 or 8 leagues off.

1775.		Time by Watch K.			Apparent Time.	Altitude of the Sun's L. L.			Latitude South.	Longitude East by K.		Thermom.		No of Obs.	Remarks.
		H	M	S		H	M	S		°	'	A.	B.		
3	Jan. 31.	20	1	52	18 11 14	16	4	$\frac{2}{3}$	58 37 $\frac{1}{2}$	333	8 $\frac{1}{2}$	48 $\frac{1}{2}$	33 $\frac{1}{2}$	5	C. Montagu N. 45° E.
8	Feb. 1.				Noon.	48	42	$\frac{7}{8}$	58 25			64 $\frac{1}{2}$	39		{ Ditto, E. & Friedland's Peak S. 26° E.
		5	2	40	3 11 53 $\frac{1}{2}$	35	51	$\frac{1}{8}$	58 21 $\frac{1}{2}$	333	8 $\frac{1}{2}$	66	35	4	
14	— 2.	7	49	53	5 59 50	14	10		57 48 $\frac{1}{2}$	333	24 $\frac{1}{2}$	62	37	6	
2	— 3.	2	10	48		49	11	$\frac{3}{4}$				61 $\frac{1}{2}$	66	4	
		21	14	1 $\frac{1}{2}$	19 27 38 $\frac{1}{2}$	25	33	$\frac{4}{5}$	56 44	334	27	56	36 $\frac{1}{2}$	4	
7	— 4.				Noon.	49	32		56 44			64	38		
		20	43	7	19 1 48	21	46	$\frac{2}{3}$	57 6	335	47 $\frac{1}{2}$	46 $\frac{2}{3}$	36 $\frac{1}{2}$	8	A bad horizon.
0	— 5.	7	14	26	5 38 1	16	17		57 16 $\frac{1}{2}$	337	3 $\frac{1}{2}$	57	37	6	
1	— 6.	20	23	14	19 1 22	26	7		58 21	340	48 $\frac{1}{2}$			1	
		22	8	3	20 47 46 $\frac{1}{2}$	34	19	$\frac{1}{2}$	58 21 $\frac{1}{2}$	341	12 $\frac{1}{2}$	50 $\frac{1}{2}$	38	6	
8	— 7.				Noon.	46	55	$\frac{1}{2}$	58 26 $\frac{1}{2}$			56 $\frac{2}{3}$	37 $\frac{1}{2}$		
		1	33	11		46	51	$\frac{3}{4}$						6	
		3	38	57		39	19	$\frac{1}{4}$	58 24					6	
		6	50	28 $\frac{1}{2}$	5 39 13	15	42	$\frac{1}{4}$	58 28 $\frac{1}{2}$	343	29 $\frac{1}{2}$	57	35 $\frac{1}{2}$	8	
		20	1	29	18 55 58 $\frac{1}{2}$	20	8	$\frac{3}{4}$	58 29 $\frac{1}{2}$	344	57 $\frac{3}{8}$	45 $\frac{1}{2}$	35 $\frac{1}{2}$	6	
8	— 8.				Noon.	46	33	$\frac{5}{8}$	58 29 $\frac{7}{8}$			59 $\frac{1}{2}$	37 $\frac{1}{2}$		
		19	15	0	18 16 56	14	48	$\frac{1}{2}$	58 28	346	52 $\frac{3}{8}$	47 $\frac{1}{2}$	35 $\frac{1}{2}$	3	
		20	31	36	19 33 40	24	44	$\frac{1}{2}$	58 28	346	54 $\frac{7}{8}$	52	35 $\frac{1}{2}$	6	
14	— 9.					46	18	$\frac{1}{4}$	58 26 $\frac{1}{2}$			62 $\frac{1}{2}$	40		
		5	9	58	4 13 34 $\frac{3}{4}$	26	16	$\frac{2}{3}$	58 26 $\frac{1}{2}$	347	19 $\frac{3}{8}$	67	40	6	
		18	58	57 $\frac{1}{2}$	18 6 52	13	11	$\frac{2}{3}$	58 17	348	25 $\frac{1}{2}$	50	33	6	
2	— 10.				Noon.	46	10	$\frac{3}{8}$	58 15 $\frac{1}{2}$			60	34 $\frac{1}{2}$		
		4	59	18	4 15 6	25	50	$\frac{1}{6}$	58 16 $\frac{1}{6}$	350	25 $\frac{1}{2}$	61	34	2	
		22	6	52	21 28 52	37	44	$\frac{1}{2}$	58 7	352	0 $\frac{1}{2}$	61	34	6	
7	— 11.				Noon.	45	54	$\frac{2}{3}$	58 6 $\frac{2}{3}$			46	36 $\frac{2}{3}$		
		19	20	3	18 46 38 $\frac{1}{2}$	17	51	$\frac{5}{8}$	58 23	353	12 $\frac{1}{2}$	50 $\frac{1}{2}$	33		
0	— 12.				Noon.	45	26	$\frac{1}{2}$	58 20 $\frac{5}{8}$			66	37 $\frac{2}{3}$		
		5	2	8	4 30 26 $\frac{1}{2}$	23	19	$\frac{2}{3}$	58 20	353	29 $\frac{5}{8}$	67	35 $\frac{1}{2}$	6	
		19	19	6	18 51 48	18	15	$\frac{1}{2}$	58 2	354	47			5	
1	— 13.				Noon.	45	30	$\frac{3}{8}$	57 56 $\frac{1}{2}$			59 $\frac{1}{2}$	33		
		19	42	35	19 31 10 $\frac{1}{2}$	23	16		57 28 $\frac{1}{2}$	358	48 $\frac{1}{2}$	43	32	6	A great sea.
8	— 14.				Noon.	45	43	$\frac{1}{2}$	57 23 $\frac{1}{2}$			52 $\frac{1}{2}$	32 $\frac{1}{2}$		
		4	24	24	4 19 36	24	23	$\frac{2}{3}$	57 20	0	28 $\frac{1}{2}$	54 $\frac{1}{2}$	37	8	An exceeding high sea.
		19	12	54 $\frac{1}{2}$	19 19 42	21	35	$\frac{3}{4}$	56 47 $\frac{5}{8}$	3	23 $\frac{1}{2}$	43 $\frac{1}{2}$	34 $\frac{1}{2}$	3	Cloudy, & a great sea.
		19	56	23 $\frac{1}{2}$	20 3 32	27	23	$\frac{1}{2}$	56 46 $\frac{1}{2}$	3	29 $\frac{1}{2}$	46	34 $\frac{1}{2}$	6	
Having now made upwards of 360° of Longitude, I rejected a circle, and repeated 8 February 14th, to make my day correspond with the day at Greenwich.															
3	— 14.				Noon.	46	9	$\frac{2}{3}$	56 37 $\frac{3}{8}$			56 $\frac{1}{2}$	35 $\frac{1}{2}$		
		4	20	34	4 33 54 $\frac{1}{2}$	22	26	$\frac{1}{2}$	56 18	5	3 $\frac{1}{2}$	57	35 $\frac{1}{2}$	6	
		20	7	21	20 24 8	30	13	$\frac{1}{4}$	55 30 $\frac{1}{8}$	5	56 $\frac{1}{2}$	50	35 $\frac{1}{2}$	6	A troublesome sea.
8	— 15.				Noon.	47	0	$\frac{1}{2}$	55 26 $\frac{1}{8}$			58	36 $\frac{1}{2}$		

ON BOARD THE RESOLUTION.

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1775.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	M					A.	B.		
24 Feb. 16.	4	39	55	4 59 54	18 28 $\frac{1}{2}$	54 24 $\frac{1}{8}$	6 47 $\frac{1}{8}$	60 33 $\frac{1}{2}$	6	
♀ — 17.	19	16	40	19 43 4	24 27 $\frac{1}{2}$	54 21 $\frac{1}{2}$	8 24 $\frac{5}{8}$	50 33	6	
				Noon.	47 21 $\frac{1}{8}$	54 23 $\frac{7}{8}$		58 $\frac{1}{4}$ 36	6	
h — 18.	3	44	4	4 15 14 $\frac{1}{2}$	24 35 $\frac{1}{2}$	54 25	9 36 $\frac{1}{2}$	65 36 $\frac{1}{2}$	6	
				Noon.	47 0 $\frac{1}{2}$	54 23		61 $\frac{1}{4}$ 34 $\frac{1}{2}$	6	Very cloudy.
☉ — 19.	20	0	22 $\frac{1}{2}$	20 57 0	33 30 $\frac{1}{2}$	54 13 $\frac{1}{8}$	16 3	36 $\frac{1}{2}$	6	
D — 20.				Noon.	46 26	54 15 $\frac{2}{3}$		56 40	6	
	19	33	4	20 39 53 $\frac{1}{2}$	3 56	54 25 $\frac{2}{3}$	18 37 $\frac{3}{8}$	55 36	6	
♂ — 21.				Noon.	45 55 $\frac{1}{2}$	54 24 $\frac{2}{3}$		61 37	6	Cloudy.
	3	5	38	4 16 5 $\frac{1}{2}$	23 18 $\frac{7}{8}$	54 22 $\frac{2}{3}$	19 32 $\frac{5}{8}$	64 37	8	{ Cloudy and bad horizon.
	18	16	19		21 43	55 4	21 36 $\frac{1}{8}$	47 $\frac{1}{2}$ 35	3	Cloudy.
	18	21	48 $\frac{1}{2}$	19 40 8	22 24 $\frac{9}{10}$	55 4	21 31 $\frac{1}{8}$	47 $\frac{1}{2}$ 35	2	Very cloudy.
	21	11	21		41 36 $\frac{1}{2}$	55 11 { Ship's course S. E. $\frac{1}{2}$ E. 5 $\frac{1}{2}$ miles an hour.		36	5	
	22	26	10		44 44 $\frac{1}{8}$			36	2	Very cloudy.
♀ — 22.	23	23	19		43 53 $\frac{1}{2}$				5	
24 — 23.				Noon.	45 10 $\frac{1}{2}$	54 26 $\frac{1}{8}$		61 $\frac{1}{4}$ 35 $\frac{1}{2}$		
	18	16	42	19 55 9	24 28 $\frac{1}{2}$	53 9 $\frac{2}{3}$	26 35	50 37	4	Ditto.
	19	22	52	21 1 15 $\frac{1}{2}$	33 23 $\frac{1}{2}$	53 5 $\frac{1}{2}$	26 34	52 38	8	Cloudy.
♀ — 24.				Noon.	46 23 $\frac{1}{2}$	52 51 $\frac{1}{4}$		59 $\frac{1}{2}$ 38 $\frac{1}{2}$		
	17	33	29 $\frac{1}{2}$	19 20 6 $\frac{1}{4}$	19 32	50 52 $\frac{1}{8}$	28 38		5	
h — 25.				Noon.	48 19	50 33 $\frac{1}{2}$		54 41		
	18	7	45	19 59 43	25 38 $\frac{1}{2}$	49 37	29 58 $\frac{7}{8}$	56 40 $\frac{2}{3}$	6	
	19	45	24	21 37 44	39 24 $\frac{3}{8}$	49 31 $\frac{1}{2}$	30 4 $\frac{1}{2}$	59 42	6	Ditto.
☉ — 26.				Noon.	49 9 $\frac{1}{2}$	49 20 $\frac{1}{2}$		62 $\frac{1}{2}$ 45 $\frac{1}{2}$		
D — 27.				Noon.	50 9 $\frac{1}{2}$	47 58 $\frac{2}{3}$		66 $\frac{2}{3}$ 47		
♂ — 28.	23	5	20 $\frac{3}{4}$		47 44 $\frac{3}{4}$	46 54 { ☉ N. 31 W. at 2d Observation. Ship's course N. W. 4 $\frac{1}{2}$ miles an h.			6	Bad horizon.
	0	39	41 $\frac{1}{2}$		37 0				5	
	2	25	28	4 32 46 $\frac{1}{2}$	20 25 $\frac{3}{4}$	46 49	33 46 $\frac{7}{8}$	63 $\frac{1}{2}$ 43 $\frac{1}{2}$	6	
8 March 1.	17	27	0 $\frac{1}{2}$	19 24 33	19 39 $\frac{2}{3}$	45 54	31 24		8	Very cloudy.
24 — 2.				Noon.	51 27	45 32 $\frac{2}{3}$		54 $\frac{1}{2}$ 47		
	2	11	56	4 8 4	24 24 $\frac{1}{2}$	45 14	31 2 $\frac{1}{2}$	54 43	6	
	17	18	13	19 11 28	17 25 $\frac{1}{2}$	44 8 $\frac{1}{2}$	30 19 $\frac{1}{2}$	49 42	6	
♀ — 3.				Noon.	52 43 $\frac{1}{4}$	43 53 $\frac{3}{8}$		49 $\frac{1}{2}$ 44		
	2	27	0	4 19 24	22 35	43 34 $\frac{1}{8}$	30 6 $\frac{1}{2}$	52 $\frac{1}{2}$ 44	6	
	17	29	16	19 19 3	18 34 $\frac{1}{2}$	43 43 $\frac{1}{2}$	29 27 $\frac{1}{4}$	53 $\frac{1}{2}$ 51 $\frac{1}{4}$	10	Very hazy.
h — 4.				Noon.	52 26 $\frac{2}{3}$	43 46 $\frac{1}{4}$		56 $\frac{1}{2}$ 55		
	1	45	5	3 32 34	30 16 $\frac{2}{3}$	43 49 $\frac{1}{2}$	28 52 $\frac{7}{8}$	59 57	3	
	1	56	28	3 44 9 $\frac{1}{2}$	28 21	43 49 $\frac{1}{2}$	28 55	59 57	6	
	17	33	24 $\frac{1}{2}$	19 15 46	17 39 $\frac{1}{8}$	44 5 $\frac{1}{2}$	27 35 $\frac{1}{4}$	56 $\frac{1}{4}$ 53	6	
☉ — 5.				Noon.	52 1	43 49 $\frac{1}{4}$		58 $\frac{1}{4}$ 50 $\frac{1}{2}$		
	17	41	3	19 23 29	18 59 $\frac{1}{2}$	42 44 $\frac{1}{2}$	27 36 $\frac{1}{2}$	54 51 $\frac{1}{2}$	6	
D — 6.				Noon.	53 3 $\frac{1}{8}$	42 23 $\frac{1}{4}$		56 $\frac{1}{2}$ 52 $\frac{1}{2}$		
	1	7	35	2 50 1 $\frac{1}{2}$	37 29	42 14		59 $\frac{1}{4}$ 54	2	
	17	9	32	18 49 18	12 37 $\frac{1}{2}$	41 33	26 55 $\frac{1}{4}$	57 $\frac{1}{4}$ 57	6	

1775.	Time by Watch K.		Apparent time.	Altitude of the ☉'s L. L.		Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.	
	H	"		H	"			A.	B.			
♂ March 7.			Noon.	53	15 $\frac{1}{4}$	41	48 $\frac{1}{2}$	63	61 $\frac{1}{3}$			
	1	28 27 $\frac{1}{2}$	3 7 42 $\frac{1}{2}$	34	28 $\frac{1}{8}$	41	39 $\frac{1}{2}$	26	48 $\frac{1}{8}$	64	60 $\frac{1}{4}$	2
	17	54 2	19 31 58 $\frac{1}{2}$	20	13 $\frac{1}{3}$	41	34 $\frac{2}{3}$	26	27 $\frac{7}{8}$	64 $\frac{1}{2}$	62	6
♀ — 8.			Noon.	52	52 $\frac{3}{4}$	41	47 $\frac{2}{3}$	68 $\frac{1}{2}$	64			
	17	22 59	18 57 54 $\frac{1}{2}$	13	38 $\frac{2}{3}$	42	1 $\frac{2}{3}$	25	41 $\frac{7}{8}$	66	62	6
♂ — 9.			Noon.	52	10 $\frac{7}{8}$	42	6	67	63 $\frac{1}{4}$			
	3	0 49 $\frac{1}{2}$	4 32 36 $\frac{1}{2}$	18	54 $\frac{1}{6}$	42	9 $\frac{2}{3}$	24	54 $\frac{7}{8}$	57	56 $\frac{1}{2}$	6
	18	5 37	19 36 9	20	32 $\frac{1}{4}$	41	10	24	35 $\frac{1}{2}$	58 $\frac{1}{2}$	54	10 Very cloudy.
♀ — 10.			Noon.	52	56 $\frac{1}{2}$	40	56 $\frac{2}{3}$	59 $\frac{1}{2}$	52 $\frac{1}{2}$			
	1	55 25	3 24 41	31	5 $\frac{3}{4}$	40	50	24	16	60 $\frac{1}{2}$	52 $\frac{1}{2}$	5
	2	26 6	3 55 21	25	42 $\frac{3}{4}$	40	49 $\frac{1}{3}$	24	15 $\frac{7}{8}$	61	52 $\frac{1}{2}$	10
	17	37 31 $\frac{1}{2}$	19 6 32	14	59 $\frac{1}{4}$	40	3	24	12	57 $\frac{1}{2}$	51	6
♂ — 11.			Noon.	53	26 $\frac{7}{8}$	40	2 $\frac{9}{10}$	59	57 $\frac{1}{2}$			
	20	37 6	22 8 20	46	4	38	57	24	43 $\frac{1}{2}$	61	61 $\frac{1}{4}$	6 Very cloudy.
○ — 12.			Noon.	54	15 $\frac{1}{3}$	38	50 $\frac{5}{8}$	61 $\frac{1}{4}$	62			
	1	34 25	3 4 12	34	46 $\frac{1}{4}$	38	44 $\frac{2}{3}$	24	22 $\frac{1}{8}$	65	63 $\frac{1}{2}$	6
	19	39 19	21 4 48	36	54 $\frac{7}{8}$	37	33 $\frac{2}{3}$	23	16 $\frac{7}{8}$	67 $\frac{1}{4}$	68 $\frac{1}{4}$	8
♂ — 13.			Noon.	55	24 $\frac{3}{8}$	37	18 $\frac{1}{8}$	70 $\frac{1}{2}$	71			
	1	45 28 $\frac{1}{2}$	3 7 34	34	52 $\frac{9}{10}$	37	5 $\frac{1}{6}$	22	25 $\frac{7}{8}$	73	72 $\frac{1}{2}$	6
	19	24 35	20 46 54	33	53 $\frac{1}{12}$	36	38 $\frac{1}{2}$	22	28	72	70 $\frac{1}{2}$	6
♂ — 14.			Noon.	55	51 $\frac{1}{2}$	36	27 $\frac{1}{2}$	72	72 $\frac{1}{2}$			
	2	33 22 $\frac{1}{2}$	3 56 13 $\frac{1}{2}$	25	53 $\frac{1}{8}$	36	18 $\frac{1}{2}$	22	35 $\frac{7}{8}$	73	70 $\frac{1}{2}$	6
	17	37 38	18 59 56	13	19 $\frac{5}{8}$	35	20 $\frac{2}{3}$	23	19 $\frac{1}{3}$	71	69	6
♀ — 15.			Noon.	56	39 $\frac{1}{3}$	35	15 $\frac{1}{12}$	71	72 $\frac{1}{2}$			
	2	55 38	4 18 38	21	30	35	27 $\frac{1}{6}$	23	26 $\frac{7}{8}$	73 $\frac{1}{2}$	69	10
	18	50 14 $\frac{1}{3}$	20 12 8 $\frac{1}{2}$	27	33	34	49	22	19 $\frac{1}{2}$	69	67	6
♂ — 16.			Noon.	56	42 $\frac{1}{2}$	34	49 $\frac{1}{12}$	71	69			
	2	16 27	3 37 44	29	25 $\frac{1}{10}$	34	49 $\frac{1}{6}$	22	9 $\frac{3}{8}$	71 $\frac{1}{4}$	68 $\frac{1}{4}$	6
	17	45 23	19 2 38	13	28 $\frac{1}{8}$	34	56	21	8 $\frac{1}{4}$	70	69	6
♀ — 17.			Noon.	56	5 $\frac{1}{2}$	35	2	70	70			
	2	46 6	4 3 21	24	4 $\frac{2}{3}$	35	7 $\frac{1}{2}$	21	10 $\frac{1}{4}$	70 $\frac{1}{2}$	69 $\frac{1}{2}$	6
	17	47 46	13 32 $\frac{1}{2}$	34	58	20	54 $\frac{5}{8}$	70	68			6
♂ — 18.			Noon.	55	44 $\frac{1}{3}$	34	59 $\frac{1}{2}$	71 $\frac{1}{2}$	70 $\frac{1}{2}$			
	21	32 12 $\frac{1}{2}$	22 46 45 $\frac{1}{2}$	51	31	34	49 $\frac{1}{3}$	20	25	67	65 $\frac{1}{2}$	2
○ — 19.			Noon.	55	29 $\frac{1}{8}$	34	51 $\frac{3}{10}$	67 $\frac{1}{4}$	65 $\frac{3}{4}$			
	1	3 38	2 17 2 $\frac{2}{3}$	42	50 $\frac{5}{8}$	34	57	20	8	67 $\frac{1}{4}$	65 $\frac{1}{4}$	6
	19	40 28 $\frac{1}{2}$	33 0 $\frac{2}{3}$	34	18			67 $\frac{1}{3}$	65			6 The Table-hill E. by N.
♂ — 20.			Noon.	55	43 $\frac{2}{3}$	34	13	66 $\frac{1}{2}$	66 $\frac{1}{4}$			The Table-hill N. 80° E.
♂ — 21.	0	51 37	1 59 55 $\frac{2}{3}$	45	32 $\frac{1}{8}$			79 $\frac{1}{3}$	76 $\frac{1}{2}$	5	In Table Bay.	
♂ — 23.	I carried the watch on shore at the Cape of Good Hope, and compared it with the clock every day from the 24th to ○ April 23, (see p. 132). From these comparisons, it appeared that the watch was then gaining 13", 204 a day on mean time, that it was too slow for mean time at the Cape on ♀ March 24 at noon by 1 h. 14' 15", 6, and gave the longitude of the Cape Town 18° 36' 40" East of Greenwich, reckoning in the manner which I did in our passage from New Zealand.											

1775.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude S.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	' "	H	' "	' "	' "	A.	B.		
24 March 23.	If we reckon all the way from England at its Greenwich rate, it will place the Cape Town $343^{\circ} 15' 47''\frac{1}{2}$ East of Drake's Island, or $338^{\circ} 59''\frac{2}{3}$ East of Greenwich.									
	It will be found, (p. 14.) that the watch was too slow for mean time at the Cape, on Nov. 14 at noon 1772, by — — — — —									
	It stopped June 28, 1774. — — — — —									
	Their sum is — — — — —									
	The watch ought to have gained between Nov. 14, 1772, and March 24, 1775, according to the rate it was going at when here last — — — — —									
	Hence it ought to have been too slow, March 24 at noon, by — — — — —									
	I found it actually too slow that day at noon, by — — — — —									
	The difference is — — — — —									
	equal to $32^{\circ} 30' 55''\frac{1}{2}$ of longitude, the error of the watch in two years and five months nearly.									
	The following longitudes of the ship are computed, on supposition that the watch gains as above-mentioned, that it was too slow for mean time at the Cape on April 23 at noon, by 1 h. 7' 38", 48, and that the longitude of the Cape Town is $18^{\circ} 23' 15''$ East, as was determined by Messrs. Mason and Dixon, in the year 1761.									
24 April 27.	18 40 19	19 42 53 $\frac{1}{2}$	12 34 $\frac{1}{2}$	33 4	16 42 $\frac{7}{8}$	63 $\frac{1}{2}$	63 $\frac{1}{2}$	6		
♀ ——— 28.		Noon.	42 49 $\frac{1}{2}$	32 50		66	68 $\frac{1}{2}$			
	18 39 42 $\frac{1}{2}$	19 32 10 $\frac{1}{2}$	10 55 $\frac{2}{3}$	31 45 $\frac{2}{3}$	14 12 $\frac{3}{8}$	65 $\frac{1}{2}$	64	6		
♂ ——— 29.		Noon.	43 49 $\frac{3}{4}$	31 31		66				
	18 46 3	19 29 4	10 39 $\frac{1}{8}$	30 29	11 51 $\frac{1}{2}$	64 $\frac{1}{2}$	62	5		
☉ ——— 30.		Noon.	44 44 $\frac{1}{3}$	30 17 $\frac{2}{3}$		64	63 $\frac{1}{2}$			
	19 2 6 $\frac{2}{3}$	19 38 20	12 43 $\frac{3}{4}$	29 21	10 11 $\frac{1}{2}$	63 $\frac{3}{4}$	63 $\frac{1}{2}$	3		
♂ May 1.		Noon.	45 31 $\frac{1}{2}$	29 11 $\frac{7}{8}$		65 $\frac{1}{3}$	66 $\frac{1}{4}$			
	4 20 30	4 54 30 $\frac{1}{2}$	6 18 $\frac{4}{5}$	29 1 $\frac{3}{8}$	9 38 $\frac{1}{8}$	67	65	6		
	20 15 11	20 44 55	25 32 $\frac{1}{3}$	28 20 $\frac{1}{8}$	8 35 $\frac{3}{8}$	66	65 $\frac{1}{2}$	6		
♂ ——— 2.		Noon.	46 14 $\frac{3}{8}$	28 11 $\frac{1}{8}$		67	66 $\frac{2}{3}$			
	4 23 44	4 51 33	7 6 $\frac{7}{8}$	28 0 $\frac{2}{3}$	8 7 $\frac{1}{2}$	68	66 $\frac{1}{2}$	5		
	18 58 31	19 22 28	10 12	27 12 $\frac{1}{8}$	7 10	68 $\frac{1}{2}$	67	6		
♀ ——— 3.		Noon.	47 7 $\frac{1}{2}$	27 0 $\frac{5}{8}$		70	69			Cloudy.
	23 49 14		47 0 $\frac{4}{5}$	27 1	Ship's course N.N.W. $\frac{1}{2}$ W. $3\frac{1}{2}$ miles an h.	69	69	5		
	0 44 39		44 6 $\frac{1}{2}$			69	69	5		
	3 46 56	4 9 18	15 54 $\frac{1}{2}$	26 50	6 47	71 $\frac{1}{2}$	68 $\frac{1}{2}$	5		
	19 2 56	19 24 53 $\frac{1}{2}$	10 41 $\frac{7}{8}$	26 42 $\frac{1}{8}$	6 41 $\frac{3}{8}$	69 $\frac{1}{2}$	66 $\frac{1}{2}$	6		
24 ——— 4.		Noon.	47 16	26 34 $\frac{1}{2}$		69 $\frac{1}{2}$	67 $\frac{3}{4}$			
	3 45 34 $\frac{1}{2}$	4 6 44	16 26 $\frac{1}{4}$	26 25 $\frac{3}{8}$	6 30 $\frac{1}{2}$	70 $\frac{1}{2}$	68 $\frac{1}{2}$	5		
♀ ——— 5		Noon.	47 30 $\frac{1}{2}$	26 2		71 $\frac{3}{4}$	67			Cloudy.

Cloudy.

Ship's course
N.N.W. $\frac{1}{2}$ W.
3 $\frac{1}{2}$ miles an h.

Cloudy.

1775.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude South.	Longitude East by K.	Thermom.		No. of Obs.	Remarks.
	H	M					A.	B.		
♀ May 5.	21	39 55		38 14 $\frac{2}{3}$	25 8 $\frac{2}{3}$	5 5	68	65 $\frac{1}{2}$	6	Very cloudy.
h — 6.			Noon.	48 15	25 0 $\frac{4}{3}$		68 $\frac{1}{2}$	66		Cloudy.
	3	44 19		18 38 $\frac{2}{3}$	24 45 $\frac{5}{6}$	4 40 $\frac{1}{2}$	68 $\frac{1}{2}$	67	3	Ditto.
○ — 7.	19	15 47	19 25 16	11 33 $\frac{1}{6}$	23 44 $\frac{1}{2}$	3 40 $\frac{3}{8}$	66 $\frac{1}{2}$	65 $\frac{1}{4}$	6	
			Noon.	49 31 $\frac{1}{2}$	23 27 $\frac{1}{2}$		68	67 $\frac{1}{2}$		
	4	39 3	4 45 46 $\frac{1}{2}$	9 25 $\frac{1}{2}$	23 11 $\frac{2}{3}$	3 0 $\frac{1}{4}$	68	66 $\frac{1}{2}$	5	
	19	7 36 $\frac{1}{2}$	19 11 2 $\frac{1}{2}$	8 59 $\frac{1}{2}$	22 23 $\frac{1}{2}$	2 12 $\frac{3}{8}$	66 $\frac{3}{4}$	65 $\frac{1}{4}$	6	
h — 8.			Noon.	50 37 $\frac{1}{2}$	22 5		67 $\frac{1}{2}$	68		
	3	37 3 $\frac{1}{2}$	3 37 57 $\frac{1}{2}$	23 43 $\frac{9}{10}$	21 55	1 35	67	67 $\frac{1}{2}$	6	
	20	4 17	20 0 56	9 50 $\frac{1}{8}$	21 1 $\frac{1}{3}$	0 33	68	67 $\frac{1}{2}$	4	
♂ — 9.			Noon.	51 40	20 46 $\frac{1}{4}$		68 $\frac{1}{3}$	68 $\frac{1}{3}$		
	4	9 35	4 3 50 $\frac{1}{2}$	19 2 $\frac{3}{5}$	20 34 $\frac{1}{3}$	0 2 $\frac{1}{8}$	68 $\frac{1}{4}$	67 $\frac{1}{4}$	6	
	19	27 11	19 18 12	11 16	19 49	0 48 $\frac{1}{4}$	68	67 $\frac{1}{2}$	6	
♂ — 10.			Noon.	52 30 $\frac{1}{4}$	19 39 $\frac{3}{5}$		69 $\frac{1}{2}$	69 $\frac{3}{4}$		
	21	9 39	20 56 5 $\frac{1}{2}$	31 29 $\frac{4}{5}$	19 3 $\frac{1}{2}$	1 55	69 $\frac{1}{4}$	70	6	
h — 11.			Noon.	53 2	18 52 $\frac{5}{6}$		72	70 $\frac{1}{4}$		
	3	58 13	3 43 4	23 54 $\frac{1}{5}$	18 45 $\frac{1}{2}$	2 20 $\frac{3}{4}$	72 $\frac{1}{2}$	70	6	
	19	37 19	19 20 54 $\frac{1}{2}$	12 9 $\frac{2}{5}$	18 32 $\frac{1}{2}$	2 35	70 $\frac{1}{2}$	69 $\frac{1}{2}$	6	
♀ — 12.			Noon.	53 12	18 27 $\frac{1}{2}$		72 $\frac{1}{2}$	72 $\frac{1}{2}$		
	4	33 31 $\frac{1}{2}$	4 16 16	17 1 $\frac{1}{2}$	18 22 $\frac{5}{6}$	2 46 $\frac{7}{8}$	73 $\frac{3}{4}$	71	5	
	19	39 37	19 20 56	12 19	17 54 $\frac{2}{3}$	3 6 $\frac{1}{8}$	71	70 $\frac{1}{4}$	5	
h — 13.			Noon.	53 41 $\frac{5}{8}$	17 43		73	74		
	4	23 44	4 3 26 $\frac{1}{2}$	20 1 $\frac{1}{8}$	17 34 $\frac{1}{6}$	3 29 $\frac{1}{4}$	72 $\frac{3}{4}$	72 $\frac{1}{2}$	6	
	20	10 2	19 47 22 $\frac{1}{2}$	18 18	16 56 $\frac{5}{6}$	4 2 $\frac{7}{8}$	70 $\frac{1}{4}$	70	6	
○ — 14.			Noon.	54 23 $\frac{1}{2}$	16 46 $\frac{2}{3}$		73	72 $\frac{1}{4}$		
	4	24 31	3 59 53	21 4 $\frac{1}{2}$	16 39 $\frac{1}{6}$	4 31 $\frac{3}{8}$	74	72 $\frac{1}{2}$	6	
	5	14 27 $\frac{1}{2}$	4 49 46 $\frac{1}{2}$	10 22 $\frac{4}{5}$	16 37 $\frac{1}{6}$	4 31 $\frac{3}{4}$	73 $\frac{3}{4}$	72 $\frac{1}{4}$	6	
	19	41 33	19 14 52	11 31 $\frac{1}{3}$	16 10	4 57 $\frac{3}{8}$	72	71	6	
h — 15.			Noon.	54 53 $\frac{3}{4}$	16 1 $\frac{3}{4}$		73 $\frac{1}{2}$	72		
	4	45 2 $\frac{1}{2}$	4 16 4	17 52 $\frac{1}{4}$	15 56 $\frac{2}{3}$	5 33	73	72 $\frac{1}{3}$	6	
	22	16 58	21 46 56	41 53 $\frac{2}{3}$	15 55 $\frac{1}{3}$	5 46 $\frac{3}{8}$	73 $\frac{1}{2}$	73 $\frac{1}{2}$	6	
♂ — 16.			Noon.	54 45 $\frac{7}{8}$	15 55 $\frac{5}{8}$		73 $\frac{1}{2}$	75 $\frac{1}{3}$		
	4	52 33 $\frac{1}{2}$	4 22 29	16 24 $\frac{1}{2}$	15 55 $\frac{1}{3}$	5 46 $\frac{1}{4}$	73 $\frac{3}{4}$	73	6	On board the ship at anchor off James's Fort, St. Helena.
	22	1 29	21 31 16	39 2	15 55 $\frac{1}{3}$	5 45 $\frac{3}{8}$	72 $\frac{1}{4}$	71	5	
♂ — 17.			Noon.	54 32 $\frac{5}{8}$	15 55 $\frac{1}{3}$		73	73		
	5	5 43	4 35 17 $\frac{1}{2}$	13 33 $\frac{2}{3}$	15 55 $\frac{1}{3}$	5 47 $\frac{3}{4}$	74	73 $\frac{1}{2}$	6	
h — 18.			Noon.	54 19	15 55 $\frac{1}{2}$		73	72 $\frac{3}{4}$		
○ — 21.	21	17 25	20 43 53 $\frac{1}{2}$	29 45 $\frac{1}{2}$	15 33 $\frac{1}{6}$	6 15 $\frac{3}{4}$	72 $\frac{1}{3}$	70	6	Very cloudy.
h — 22.			Noon.	54 0 $\frac{2}{3}$	15 24 $\frac{1}{2}$		70 $\frac{1}{2}$	70		Ditto.
	20	44 55	20 5 30 $\frac{1}{2}$	22 15 $\frac{2}{3}$	14 45 $\frac{3}{4}$	7 39 $\frac{1}{2}$	72 $\frac{1}{2}$	72 $\frac{1}{3}$	6	Cloudy.
	21	45 30	21 5 36	34 19 $\frac{1}{2}$	14 43	7 46 $\frac{7}{8}$	73	73 $\frac{1}{2}$	8	Ditto.
♂ — 23.			Noon.	54 39 $\frac{1}{4}$	14 33 $\frac{1}{2}$		75	74 $\frac{1}{4}$		Ditto.
	20	7 40 $\frac{1}{2}$	19 20 33 $\frac{1}{2}$	13 4 $\frac{7}{8}$	13 45	9 31	73 $\frac{1}{2}$	72 $\frac{1}{3}$	10	
	20	13 46	19 26 47	14 26 $\frac{1}{3}$	13 45	9 28 $\frac{7}{8}$	73 $\frac{1}{2}$	72 $\frac{1}{3}$	5	
♂ — 24.			Noon.	55 31	13 30 $\frac{1}{2}$		74 $\frac{1}{4}$	73		
	20	31 31	19 38 44	17 42 $\frac{7}{8}$	12 6 $\frac{1}{2}$	10 51 $\frac{1}{8}$	75	72 $\frac{3}{4}$	10	

ON BOARD THE RESOLUTION.

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1775.	Time by Watch K.			Apparent Time.	Altitude of the Sun's L. L.	Latitude S.	Longitude West by K.	Thermom.		No. of Observ.	Remarks.
	H	M	S	H	M	S	M	A.	B.		
May 24.	20	40	25 $\frac{1}{2}$	19 47 46	19 39 $\frac{3}{4}$	12 5 $\frac{5}{8}$	10 49 $\frac{1}{4}$	75	73	6	
25.				Noon.	57 8	11 42 $\frac{1}{2}$		76 $\frac{3}{4}$	75	6	
	5	25	24	4 31 0	15 53	11 21	11 13	76 $\frac{1}{4}$	75	6	
	20	20	50	19 24 4 $\frac{1}{2}$	15 12 $\frac{5}{8}$	10 19	11 45 $\frac{3}{4}$	75 $\frac{3}{4}$	75	6	
26.				Noon.	58 44 $\frac{3}{4}$	9 55 $\frac{1}{10}$		77 $\frac{3}{4}$	77 $\frac{1}{4}$	6	
	5	23	10	4 24 52	17 54 $\frac{3}{4}$	9 40 $\frac{1}{3}$	12 7 $\frac{1}{2}$	77 $\frac{3}{4}$	77 $\frac{3}{4}$	6	
	19	59	51	18 58 44	10 11 $\frac{1}{12}$	8 38	12 46 $\frac{1}{2}$	77	76 $\frac{1}{2}$	6	
27.				Noon.	60 7 $\frac{1}{4}$	8 22 $\frac{1}{3}$		78 $\frac{1}{2}$	79	6	
	5	6	45	4 3 36	23 12 $\frac{1}{12}$	8 11 $\frac{2}{3}$	13 15 $\frac{1}{4}$	78	79	6	
	20	11	21	19 5 54 $\frac{1}{2}$	12 4	7 55	13 46 $\frac{1}{4}$	78 $\frac{3}{4}$	77 $\frac{1}{2}$	6	
28.				Noon.	60 20 $\frac{7}{8}$	7 58 $\frac{7}{8}$		78	78 $\frac{1}{3}$	6	
	6	7	56	4 59 13	11 25 $\frac{1}{12}$	7 55 $\frac{7}{8}$	14 33 $\frac{1}{2}$			6	On board the ship at anchor off the N.W. side of Ascension.
	6	10	25	5 1 52	10 18	7 55 $\frac{7}{8}$	14 31 $\frac{1}{8}$	79 $\frac{1}{2}$	78 $\frac{1}{2}$	6	On shore.
29.				Noon.	60 13 $\frac{1}{3}$	7 56 $\frac{1}{4}$	Dip 3 $\frac{3}{4}$	79	79		On board the ship at anchor off the N.W. side of Ascension.
30.				Noon.	60 5 $\frac{3}{4}$	7 55 $\frac{3}{8}$		79	80 $\frac{1}{2}$		
31.				Noon.	59 56	7 56 $\frac{3}{8}$		79 $\frac{1}{4}$	82		
	3	39	31	2 29 59 $\frac{1}{2}$	42 27 $\frac{5}{8}$	7 55 $\frac{7}{8}$	14 30 $\frac{3}{8}$	79	81 $\frac{1}{4}$	6	
	5	5	43	3 56 2 $\frac{1}{2}$	24 45 $\frac{3}{4}$	7 55 $\frac{7}{8}$	14 32 $\frac{1}{4}$	79 $\frac{3}{4}$	80 $\frac{1}{3}$	6	
June 1.	20	25	44 $\frac{1}{2}$	19 13 26	13 56 $\frac{3}{8}$	7 7	15 8 $\frac{1}{8}$	78	77	6	
				Noon.	60 44 $\frac{1}{2}$	6 59 $\frac{1}{2}$		79	79 $\frac{1}{2}$		
	5	0	24 $\frac{1}{2}$	3 45 18	27 30 $\frac{1}{2}$	6 58	15 48 $\frac{1}{8}$	79	79	6	
	20	22	0	19 2 5 $\frac{1}{2}$	11 30 $\frac{2}{3}$	6 45 $\frac{1}{6}$	16 56 $\frac{1}{2}$	79 $\frac{1}{2}$	77	5	
2.				Noon.	60 52 $\frac{5}{8}$	6 43 $\frac{1}{4}$		78 $\frac{3}{4}$	78 $\frac{3}{4}$		
	5	16	9	3 53 8	25 53 $\frac{5}{8}$	6 41 $\frac{1}{2}$	17 41 $\frac{1}{8}$	78 $\frac{1}{2}$	78 $\frac{1}{3}$	6	
	20	48	8	19 19 54 $\frac{1}{2}$	15 35 $\frac{1}{2}$	6 29	18 55 $\frac{5}{8}$	78 $\frac{1}{4}$	76	6	
3.				Noon.	61 1 $\frac{7}{8}$	6 26 $\frac{1}{2}$		79	78		
	4	22	37	2 50 45 $\frac{1}{2}$	39 0 $\frac{3}{4}$	6 25	19 48 $\frac{1}{2}$	79	78 $\frac{1}{4}$	6	
	20	44	45	19 7 9 $\frac{1}{2}$	12 52 $\frac{7}{8}$	6 4 $\frac{1}{3}$	21 10 $\frac{3}{8}$	79 $\frac{1}{4}$	77	6	
4.				Noon.	61 20 $\frac{1}{2}$	6 0 $\frac{3}{4}$		79	79 $\frac{1}{4}$		
	6	39	7	4 57 41 $\frac{1}{2}$	11 49 $\frac{4}{5}$	5 57 $\frac{1}{3}$	22 5 $\frac{1}{2}$	79	79 $\frac{1}{4}$	6	
	20	43	1 $\frac{1}{2}$	18 56 38	10 38 $\frac{1}{8}$	5 43 $\frac{2}{3}$	23 16 $\frac{3}{8}$	79 $\frac{1}{2}$	78 $\frac{3}{4}$	6	
5.				Noon.	61 35 $\frac{3}{8}$	5 39		79 $\frac{1}{2}$	80		
	4	51	35	3 1 42 $\frac{1}{2}$	37 13 $\frac{1}{6}$	5 36 $\frac{1}{2}$	24 6 $\frac{1}{4}$	80	80	6	
	20	51	16	18 55 9 $\frac{1}{2}$	10 29 $\frac{1}{4}$	5 14 $\frac{1}{3}$	25 37 $\frac{1}{2}$	80 $\frac{1}{2}$	79 $\frac{1}{2}$	6	
6.				Noon.	61 59 $\frac{1}{4}$	5 8 $\frac{4}{5}$			81 $\frac{3}{4}$		
	6	3	32	4 3 38 $\frac{1}{2}$	24 12 $\frac{2}{3}$	5 4 $\frac{5}{8}$	26 30 $\frac{3}{4}$	80 $\frac{1}{4}$	80 $\frac{3}{4}$	6	
	21	1	52	18 57 18	11 2 $\frac{2}{3}$	5 1	27 37	80	79 $\frac{1}{2}$	6	
7.				Noon.	62 4 $\frac{3}{8}$	4 57 $\frac{5}{8}$		80	81		
	6	26	11	4 19 12	20 58 $\frac{1}{2}$	4 48 $\frac{1}{2}$	28 11	80	81	6	
	21	17	38 $\frac{1}{2}$	19 6 2	13 25 $\frac{1}{12}$	3 59	29 16 $\frac{5}{8}$	80 $\frac{3}{4}$	80	6	
8.				Noon.	63 11 $\frac{3}{4}$	3 44 $\frac{5}{8}$		80 $\frac{3}{4}$	82 $\frac{3}{4}$		
	5	19	13	3 4 34 $\frac{1}{2}$	37 32 $\frac{1}{2}$	3 45 $\frac{1}{2}$	30 0 $\frac{1}{4}$	81	81 $\frac{1}{2}$	10	
	21	18	36	18 56 50	11 26 $\frac{1}{12}$	3 43 $\frac{1}{6}$	31 43	80 $\frac{1}{3}$	80 $\frac{1}{4}$	6	
9.				Noon.	63 8	3 43 $\frac{1}{2}$			82		The Island Ferdinando de Noronha S. W. by W. $\frac{1}{2}$ W.

1775.	Time by Watch K.			Apparent Time.	Altitude of the Sun's L. L.	Latitude South.	Longitude West by K.	Thermom.		No. of Obs.	Remarks.
	H	M	S	H				A.	B.		
June 9.	5	9	2 $\frac{1}{2}$	2 43 58 $\frac{1}{2}$	41 38 $\frac{3}{4}$	3 53 $\frac{1}{2}$	32 30 $\frac{3}{4}$	81 $\frac{1}{2}$	81 $\frac{3}{4}$	7	The Spire Rock on Fernando de Noronha S. 82° W. about 3 leagues off.
	6	15	57	3 50 32	27 35 $\frac{1}{4}$	3 52	32 34 $\frac{7}{8}$	81 $\frac{1}{2}$	81 $\frac{3}{4}$	6	
h — 10.	21	16	45	18 51 52 Noon.	10 50 $\frac{3}{4}$ 64 49	2 23 1 57	32 23 $\frac{5}{8}$	80 81 $\frac{1}{4}$	80 82 $\frac{1}{4}$	6	The said Rock, which is near the middle of the Island, S. 27° W. 4 $\frac{1}{2}$ leagues.
	7	9	57	4 45 24	16 19 $\frac{1}{2}$	1 34 $\frac{1}{3}$	32 16 $\frac{3}{8}$	81 $\frac{1}{4}$		6	
o — 11.	21	35	5	19 10 30 Noon.	15 47 $\frac{1}{2}$ 66 30 $\frac{1}{8}$	0 35 $\frac{1}{4}$ 0 11 $\frac{1}{4}$	32 12 $\frac{3}{4}$ Dip 3 $\frac{1}{4}$	79 $\frac{1}{2}$ 80 $\frac{1}{2}$	79 $\frac{1}{2}$ 81	6	
	7	0	12	4 35 47	19 13 $\frac{3}{5}$	0 12 $\frac{1}{3}$	32 7 $\frac{7}{8}$	80 $\frac{1}{2}$	81	6	
	21	58	45	19 34 58 $\frac{1}{2}$ Noon.	22 12 $\frac{3}{8}$ 68 28 $\frac{1}{8}$	1 30 $\frac{1}{3}$ 1 50 $\frac{2}{3}$	31 54 $\frac{1}{4}$ Dip 3 $\frac{3}{4}$	80 $\frac{1}{2}$ 81	80 $\frac{1}{2}$ 81 $\frac{1}{2}$	6	
D — 12.	6	32	37	4 8 48	26 9 $\frac{1}{8}$	2 10 $\frac{1}{6}$	31 52 $\frac{5}{8}$	81 $\frac{1}{4}$		6	
	21	51	50	19 28 30 Noon.	21 33 $\frac{5}{8}$ 70 24 $\frac{1}{4}$	3 34 $\frac{2}{3}$ 3 49 $\frac{3}{4}$	31 41 $\frac{1}{2}$	81 80 $\frac{1}{3}$	81 $\frac{1}{2}$ 81 $\frac{1}{3}$	6	
8 — 13.	23	6	45 $\frac{1}{2}$	20 42 50 $\frac{1}{2}$	38 42 $\frac{7}{8}$	4 25 $\frac{1}{3}$	31 43 $\frac{1}{4}$	78 $\frac{3}{4}$	79 $\frac{1}{2}$	6	
8 — 14.	7	8	25	4 44 50 $\frac{1}{3}$	18 55	4 36 $\frac{1}{2}$	31 36 $\frac{1}{8}$	80		6	
	23	53	13 $\frac{1}{2}$	21 31 41 $\frac{1}{2}$	49 56 $\frac{1}{2}$	5 32 $\frac{1}{2}$	31 1	78	78	4	Very cloudy. Ditto.
u — 15.	23	51	54	21 31 45 $\frac{1}{2}$ Noon.	50 14 $\frac{1}{8}$ 72 35 $\frac{3}{4}$	6 8 6 9 $\frac{1}{2}$	30 33 $\frac{7}{8}$	79 81 $\frac{3}{4}$	78 $\frac{1}{2}$ 81 $\frac{3}{4}$	6	
8 — 16.	6	21	13	4 1 10 $\frac{1}{2}$ Noon.	29 32 $\frac{2}{3}$ 72 37 $\frac{1}{4}$	6 10 $\frac{1}{2}$ 6 13	30 30 $\frac{1}{8}$	81 $\frac{1}{4}$	80 $\frac{1}{4}$	6	
h — 17.	7	36	12	5 16 34	12 16 $\frac{7}{8}$	6 13	30 17 $\frac{1}{2}$	79 $\frac{1}{2}$	79	6	
	23	7	43 $\frac{1}{2}$	20 47 18 Noon.	40 26 $\frac{1}{12}$ 72 35 $\frac{2}{3}$	6 8 6 12 $\frac{5}{8}$	30 25 $\frac{1}{2}$	79 $\frac{1}{2}$	77 $\frac{3}{4}$	6	
o — 18.	6	21	46	4 0 45 $\frac{1}{2}$	29 31 $\frac{3}{4}$	6 12 $\frac{2}{3}$	30 31 $\frac{7}{8}$	81 $\frac{1}{2}$	80 $\frac{3}{4}$	6	
	21	23	40	18 48 32 Noon.	16 59 73 29 $\frac{5}{8}$	7 0 7 8 $\frac{1}{8}$	30 27 $\frac{1}{8}$	80 $\frac{3}{4}$	79 $\frac{1}{2}$	6	
D — 19.	7	1	32	4 39 38	21 6 $\frac{1}{2}$	7 13	30 38 $\frac{3}{4}$	81	79 $\frac{1}{2}$	6	
	21	17	8 $\frac{1}{2}$	18 53 46 $\frac{1}{2}$	15 17 $\frac{1}{4}$	7 54	30 56 $\frac{5}{8}$	80 $\frac{3}{4}$		6	
	21	32	47	19 9 19 Noon.	18 51 $\frac{3}{4}$ 74 31 $\frac{1}{6}$	7 54 8 10 $\frac{1}{8}$	30 58 $\frac{1}{8}$	81 $\frac{1}{4}$	80 $\frac{1}{4}$	7	
8 — 20.	7	2	37	4 36 32	22 16 $\frac{1}{2}$	8 25 $\frac{1}{3}$	31 34 $\frac{3}{4}$	81 $\frac{2}{3}$	80 $\frac{3}{4}$	6	
	21	25	46	18 55 20 Noon.	16 8 $\frac{1}{3}$ 75 49 $\frac{1}{2}$	9 10 $\frac{5}{8}$ 9 28 $\frac{3}{4}$	32 36 $\frac{1}{8}$	80	79 $\frac{3}{4}$	10	
8 — 21.	6	15	32	3 42 13	35 10 $\frac{1}{2}$	9 42 $\frac{1}{6}$	33 14 $\frac{1}{2}$	80 $\frac{1}{2}$	81	5	
	21	36	1	19 0 3 $\frac{1}{2}$ Noon.	17 48 $\frac{1}{3}$ 77 32 $\frac{7}{8}$	10 49 $\frac{1}{2}$ 11 12	33 52 $\frac{1}{8}$	79 $\frac{1}{2}$	80	6	
u — 22.	6	29	48	3 51 28	33 42	11 28 $\frac{1}{2}$	34 25 $\frac{5}{8}$	80	80 $\frac{1}{2}$	6	
	21	59	45 $\frac{1}{2}$	19 18 4 Noon.	22 32 $\frac{1}{2}$ 79 14 $\frac{5}{8}$	12 35 $\frac{1}{3}$ 12 53 $\frac{1}{8}$	35 11 $\frac{5}{8}$	78	78 $\frac{1}{4}$	6	Very cloudy.
8 — 23.	6	50	55	4 7 10 $\frac{1}{2}$	30 40 $\frac{1}{2}$	13 4 $\frac{1}{3}$	35 40 $\frac{1}{8}$	79	80	6	
	21	28	33 $\frac{1}{2}$	18 42 4 Noon.	14 56 $\frac{2}{3}$ 81 0 $\frac{3}{8}$	14 14 $\frac{1}{3}$ 14 37 $\frac{9}{10}$	36 17 $\frac{1}{4}$	77 $\frac{1}{4}$	76 $\frac{3}{4}$	6	Cloudy.
h — 24.								78	78 $\frac{1}{4}$		

ON BOARD THE RESOLUTION.

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1775.	Time by Watch K.		Apparent Time.	Altitude of the Sun's L. L.	Latitude N.	Longitude West by K.	Thermom.		No of Obs.	Remarks.
	H	M					A.	B.		
h June 24.	6	50	54	4 2 53 $\frac{1}{2}$	32 11 $\frac{2}{3}$	14 53	36 35 $\frac{1}{2}$	77 $\frac{1}{2}$ 78	6	
o — 25.			Noon.	82 44 $\frac{1}{2}$	16 20 $\frac{1}{2}$		77 $\frac{1}{2}$ 82 $\frac{1}{2}$			
	6	29	29	3 36 38 $\frac{1}{2}$	38 45 $\frac{1}{3}$	16 35	37 43 $\frac{7}{8}$	76 $\frac{1}{2}$ 79	6	Cloudy.
	22	35	7	19 38 46	28 53 $\frac{5}{8}$	17 39 $\frac{1}{8}$	38 31 $\frac{1}{2}$	77 $\frac{1}{2}$ 77 $\frac{1}{2}$	6	
D — 26.			Noon.	84 19 $\frac{1}{3}$	17 53 $\frac{1}{3}$		77 $\frac{1}{2}$ 78 $\frac{3}{4}$			
	6	38	27	3 40 28	38 18 $\frac{7}{8}$	18 7 $\frac{1}{3}$	38 54 $\frac{1}{8}$	76 78 $\frac{1}{2}$	6	
	21	23	49	18 23 51	12 35 $\frac{1}{2}$	19 9 $\frac{1}{2}$	39 19 $\frac{1}{2}$	75 $\frac{1}{2}$ 75 $\frac{1}{2}$	6	
δ — 27.			Noon.	85 59 $\frac{1}{2}$	19 31 $\frac{7}{8}$		78			
	6	55	1	3 53 38 $\frac{1}{2}$	35 45 $\frac{5}{8}$	19 50 $\frac{1}{3}$	39 38 $\frac{1}{2}$	76 $\frac{1}{2}$ 77	6	
	21	15	35	18 13 5 $\frac{1}{2}$	10 50	20 51	39 51 $\frac{1}{2}$	77 75	6	
ξ — 28.			Noon.	87 51 $\frac{3}{8}$	21 20 $\frac{9}{10}$		78 $\frac{1}{2}$ 78			
	7	11	2	4 7 9 $\frac{1}{2}$	33 10 $\frac{2}{3}$	21 41 $\frac{1}{2}$	40 9 $\frac{1}{2}$	78 $\frac{1}{2}$ 80	4	Cloudy.
	2	46	39 $\frac{1}{2}$	23 41 7	85 28	23 8 $\frac{1}{2}$	40 29 $\frac{1}{8}$	81 78 $\frac{1}{2}$	6	
u — 29.			Noon.	89 43 $\frac{3}{5}$	23 10 $\frac{1}{12}$		78 $\frac{1}{2}$ 81			
	3	25	7	0 19 44	85 16 $\frac{5}{8}$	23 11 $\frac{1}{2}$	40 26 $\frac{7}{8}$	81 78 $\frac{1}{2}$	6	
	22	22	43	19 14 43	25 28	24 47	41 1 $\frac{1}{8}$	75 $\frac{1}{2}$ 76 $\frac{1}{2}$	6	
♀ — 30.			Noon.	87 50 $\frac{1}{2}$	25 9 $\frac{7}{8}$	Dip 4 $\frac{1}{2}$	77 80 $\frac{1}{2}$			
	7	6	38 $\frac{1}{2}$	3 57 49 $\frac{1}{2}$	36 5	25 30	41 11	77 80	6	
	21	13	7	18 2 42 $\frac{1}{2}$	10 35 $\frac{5}{8}$	26 34 $\frac{5}{8}$	41 31	75 74 $\frac{1}{2}$	6	
h July 1.			Noon.	85 52	27 4 $\frac{3}{8}$	Dip 4 $\frac{1}{2}$	76 76 $\frac{1}{2}$			
	6	6	19	2 55 29 $\frac{1}{2}$	50 8 $\frac{1}{10}$	27 21 $\frac{2}{3}$	41 35 $\frac{1}{2}$	75 $\frac{1}{2}$ 76	10	
	7	17	54	4 7 9 $\frac{1}{2}$	34 21 $\frac{3}{8}$	27 26 $\frac{2}{3}$	41 33 $\frac{1}{2}$	75 $\frac{1}{2}$ 76	6	
	23	56	22	20 44 18	45 43 $\frac{1}{2}$	28 26 $\frac{5}{8}$	41 49 $\frac{1}{2}$	75 74 $\frac{3}{4}$	6	
o — 2.			Noon.	84 10 $\frac{1}{2}$	28 42	Dip 4 $\frac{1}{2}$	76 $\frac{1}{2}$ 75			
	5	38	29	2 26 20	56 33 $\frac{1}{10}$	28 53	41 48 $\frac{7}{8}$	77 75 $\frac{3}{4}$	10	
	7	24	9	4 12 12	33 29 $\frac{1}{3}$	28 58	41 45 $\frac{1}{2}$	77 $\frac{1}{2}$ 75 $\frac{3}{4}$	6	
	21	55	57	18 44 51	20 17	29 43	41 29 $\frac{1}{2}$	74 $\frac{1}{2}$ 74	6	
D — 3.			Noon.	82 47 $\frac{7}{8}$	29 59 $\frac{1}{2}$		76 $\frac{1}{2}$ 74			
	6	1	4	2 50 48	51 11 $\frac{1}{3}$	30 8	41 14 $\frac{3}{8}$	76 $\frac{1}{2}$ 75	6	
	21	17	8 $\frac{1}{2}$	18 7 41 $\frac{1}{2}$	12 57 $\frac{1}{12}$	30 52 $\frac{2}{3}$	40 58 $\frac{1}{2}$	74 73 $\frac{1}{3}$	3	Cloudy.
δ — 4.			Noon.	81 24 $\frac{1}{2}$	31 18 $\frac{1}{8}$		76 75			
	6	30	28	3 21 22 $\frac{1}{2}$	44 36 $\frac{3}{5}$	31 25	40 50 $\frac{1}{2}$		6	
	23	13	39	20 5 13 $\frac{1}{2}$	37 35 $\frac{1}{3}$	32 22 $\frac{5}{8}$	40 36 $\frac{1}{2}$	74 73	6	
ξ — 5.			Noon.	80 5 $\frac{3}{8}$	32 31 $\frac{1}{2}$		76 75			
	8	28	27	5 20 22 $\frac{1}{2}$	19 52 $\frac{1}{2}$	32 38 $\frac{1}{2}$	40 29 $\frac{1}{2}$	77 76	6	
	23	57	56	20 49 50 $\frac{1}{2}$	46 55 $\frac{1}{3}$	33 5	40 25 $\frac{5}{8}$	75 $\frac{1}{2}$ 74 $\frac{1}{2}$	6	
u — 6.			Noon.	79 22 $\frac{7}{8}$	33 8 $\frac{1}{8}$		76 $\frac{3}{4}$ 76 $\frac{1}{2}$			
	5	49	18	2 41 32	52 53 $\frac{1}{3}$	33 10	40 19 $\frac{1}{2}$	78 $\frac{3}{4}$ 76 $\frac{3}{4}$	6	
	6	15	0	3 7 16	47 31 $\frac{2}{3}$	33 10	40 18 $\frac{7}{8}$	78 $\frac{3}{4}$ 76 $\frac{3}{4}$	5	
	22	52	7	19 44 27	33 16	33 25 $\frac{2}{3}$	40 13 $\frac{1}{2}$	76 75	6	
♀ — 7.			Noon.	78 52 $\frac{1}{8}$	33 32 $\frac{1}{2}$		78 77 $\frac{1}{2}$			
	7	49	39	4 42 33	27 42 $\frac{9}{10}$	33 38 $\frac{1}{3}$	40 3 $\frac{1}{2}$	79 $\frac{1}{2}$	6	
	23	51	15	20 43 49 $\frac{1}{2}$	45 33 $\frac{1}{3}$	34 1 $\frac{1}{2}$	40 4 $\frac{1}{2}$	74 $\frac{3}{4}$ 74	6	
h — 8.				4 1 18 $\frac{1}{2}$	36 13 $\frac{1}{4}$	34 14 $\frac{1}{2}$	40 11 $\frac{3}{8}$	77 79 $\frac{1}{2}$	10	
	23	10	34 $\frac{1}{2}$	20 1 44	36 49 $\frac{1}{2}$	34 55	40 20	75 75 $\frac{1}{2}$	5	
o — 9.			Noon.	77 8 $\frac{1}{8}$	35 3		76 $\frac{1}{2}$ 76 $\frac{3}{4}$			

1775.	Time by Watch K.			Altitude of the Sun's L. L.	Latitude North.	Longitude West by K.	Thermom.		No. of Obs.	Remarks.
	H	M	S				A.	B.		
☉ July 9.	7 48 17	4 40 38	28 14 $\frac{3}{4}$	35 10	40 0 $\frac{1}{4}$	77 $\frac{1}{2}$	78 $\frac{1}{2}$	5		
	23 20 18	20 14 25 $\frac{1}{2}$	39 25 $\frac{1}{2}$	35 34 $\frac{1}{2}$	39 30	75	75 $\frac{1}{2}$	6		
☽ — 10.		Noon.	76 18 $\frac{1}{4}$	35 45 $\frac{1}{2}$						
	7 49 1 $\frac{1}{2}$	4 45 48	27 16	35 58	38 48 $\frac{3}{8}$	77 $\frac{1}{2}$	77	6		
	22 45 52	19 49 56	34 26 $\frac{1}{4}$	36 44	36 55 $\frac{1}{2}$	76	76 $\frac{1}{2}$	6		
♂ — 11.		Noon.	75 0 $\frac{1}{4}$	36 55 $\frac{3}{10}$		75 $\frac{1}{4}$	76	6		
	6 57 48	4 6 8	35 11 $\frac{3}{4}$	37 6	35 49 $\frac{7}{8}$	76	76	6		
	22 53 33	20 10 2	38 23 $\frac{1}{3}$	37 58	33 44 $\frac{1}{8}$	74	76	6		
♀ — 12.		Noon.	73 35 $\frac{7}{8}$	38 12 $\frac{1}{8}$		76 $\frac{1}{2}$	75 $\frac{1}{2}$	6		
	6 28 4 $\frac{1}{2}$	3 49 24	38 28 $\frac{1}{4}$	38 13	32 29 $\frac{1}{4}$	74 $\frac{1}{4}$	75	6		
	23 53 18	21 22 22	52 17 $\frac{3}{4}$	38 28 $\frac{1}{3}$	30 29 $\frac{7}{8}$	73	74	6	Very hazy.	
☽ — 13.		Noon.	73 9 $\frac{1}{4}$	38 29 $\frac{2}{3}$		75	74 $\frac{2}{3}$	6		
	6 44 32	4 17 5	32 29 $\frac{1}{3}$	38 32	29 36 $\frac{1}{8}$	75 $\frac{1}{2}$	74	6	The island Fayal, East.	
In the morning I took the Watch and Astronomical Quadrant on shore, at the Villa de Horta, on the island Fayal, and noted the times of equal altitudes of the Sun by the Watch every day, from the 14th to the 18th inclusive: from whence it appeared that the Watch was then gaining 13", 528 a day on mean time, or 0", 324 more than it was gaining at the Cape of Good Hope; and that it was 2 h. 20' 37$\frac{1}{4}$ to fast for mean time at Fayal on July 18th at noon. The rate of its going, found at this place, being so little different from that which was found at the Cape, I continued to compute the longitude of the ship on the same suppositions as I had done before.										
♂ — 18.	21 48 53	19 23 28	28 42 $\frac{2}{3}$	38 46 $\frac{1}{2}$	28 39 $\frac{1}{2}$	73	72 $\frac{1}{2}$	6	Cloudy. The N. Point of St. George S. 47° W. 2 miles off.	
♀ — 19.	17 19 3	4 58 39	24 25 $\frac{1}{4}$	39 2 $\frac{1}{6}$	27 22 $\frac{1}{4}$	74	74	3	Very cloudy. The E. end of Tercera S. 13° W. 5 leagues.	
	21 10 42	18 54 38 $\frac{1}{2}$	23 5 $\frac{1}{8}$	39 9	26 15	71 $\frac{1}{3}$	72	6		
☽ — 20.	1 24 35		68 18 $\frac{4}{5}$	39 13 $\frac{1}{3}$	☉ S. 8° W. at 1st Obs. Ship's course E. $\frac{1}{2}$ N. 2 miles an hour.		76	5		
	2 30 15		70 58				75 $\frac{1}{4}$	5		
	3 26 28		65 43 $\frac{1}{8}$				74 $\frac{1}{2}$	5		
	7 24 2	5 9 58 $\frac{1}{2}$	22 10 $\frac{1}{2}$	39 15 $\frac{2}{3}$	25 42 $\frac{7}{8}$	72 $\frac{1}{4}$	77 $\frac{1}{2}$	6		
	21 35 40	19 25 34	28 56 $\frac{1}{4}$	39 24 $\frac{2}{3}$	24 41 $\frac{1}{4}$	72 $\frac{1}{4}$	70	6		
♀ — 21.	5 43 44	3 36 8	40 8 $\frac{2}{3}$	39 26 $\frac{2}{3}$	24 2 $\frac{1}{8}$	72	74	5		
	22 46 12	20 41 56	43 29 $\frac{1}{3}$	39 35 $\frac{2}{3}$	23 9 $\frac{3}{8}$	70	71 $\frac{1}{2}$	5	Very cloudy.	
♂ — 22.		Noon.	70 28 $\frac{2}{3}$	39 37 $\frac{2}{3}$		71 $\frac{1}{4}$	74 $\frac{1}{2}$	6		
	5 3 46	3 1 2 $\frac{1}{2}$	46 39 $\frac{3}{4}$	39 45 $\frac{1}{2}$	22 45 $\frac{1}{4}$	71 $\frac{3}{4}$	73 $\frac{3}{4}$	6		
	21 25 11	19 29 13	29 27 $\frac{2}{3}$	40 32 $\frac{2}{3}$	21 1	70	68	10		
	23 18 1	21 22 38	50 37 $\frac{2}{3}$	40 39	20 52 $\frac{1}{4}$	70 $\frac{3}{4}$	67 $\frac{1}{2}$	10		
☉ — 23.		Noon.	69 5 $\frac{3}{8}$	40 48 $\frac{3}{4}$		71 $\frac{1}{2}$	69 $\frac{3}{4}$	6		
	6 6 33	4 13 48	32 38 $\frac{2}{3}$	41 4 $\frac{1}{3}$	20 11 $\frac{5}{8}$	72 $\frac{1}{2}$	72	6		
	21 39 37	19 52 12	33 39 $\frac{1}{2}$	41 52	18 49 $\frac{1}{4}$	67 $\frac{1}{2}$	68	6		

ON BOARD THE RESOLUTION.

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1775.	Time by Watch K.		Apparent Time.	Altitude of the ☉'s L. L.	Latitude N.	Longitude West by K	Thermom.		No. of Obs.	Remarks.																																																															
	H	"	H	"	"	"	A.	B.																																																																	
July 24.			Noon.	67 35½	42 6½		70	69½		A bad horizon.																																																															
	5 30 14		3 45 8	37 45⅛	42 18	18 13⅛	70	70	6																																																																
	21 27 36		19 46 40	32 25⅞	43 22	17 8⅛	68	65½	6																																																																
July 25.			Noon.	65 48½	43 40½		69½	67																																																																	
	5 33 17		3 55 19	35 34⅜	43 57½	16 22¾	70	68	6																																																																
	22 16 35		20 44 48	42 11½	45 17	14 47⅞	64¼	63½	6																																																																
July 26.			Noon.	63 40⅛	45 36		66	64																																																																	
	5 2 37		3 34 29½	38 44⅛	45 53	13 51½	67	63⅓	6																																																																
	21 19 24		19 59 4	33 55⅞	47 1	11 52½	64	62¾	6																																																																
July 27.			Noon.	61 46⅝	47 16¼		67	64½																																																																	
	4 49 49		3 2 54	38 28½	47 27	11 0¼	69½		6																																																																
	21 41 39		20 30 56	38 50¼	47 59⅓	9 26½	65	62¼	6																																																																
July 28.			Noon.	60 39⅜	48 9½		67	64½																																																																	
	5 50 58½		4 44 50	26 16⅔	48 24	8 15½	69¼	65	6																																																																
	21 2 48		20 6 27	34 26⅔	49 17⅛	5 46½	65½	62¼	6																																																																
July 29.			Noon.	58 57⅞	49 37½		67½	62⅓																																																																	
	4 9 55		3 18 4	39 45	49 54⅓	4 38⅓	69	64	6																																																																
A little before noon on the 30th we anchored at Spithead, and soon after I carried the Watch on shore, in company with Captain Cook and Lieutenant Cooper, to the Observatory belonging to the Royal Academy at Portsmouth, where I transcribed the following Observations of the Sun's transit over the meridian from their books, viz. <table><tr><th>First Wire.</th><th>Second Wire.</th><th>Middle Wire.</th><th>Fourth Wire.</th><th>Fifth Wire.</th><th></th></tr><tr><td></td><td></td><td>H</td><td></td><td></td><td></td></tr><tr><td>July 25.</td><td>15 8¼</td><td>8 16 9¼</td><td></td><td></td><td>☉'s 1st Limb.</td></tr><tr><td></td><td></td><td>18 23</td><td>19 23¼</td><td></td><td>☉'s 2d Limb.</td></tr><tr><td>July 26.</td><td>18 5</td><td>8 20 5½</td><td>23 19½</td><td>24 19½</td><td>☉'s 1st Limb.</td></tr><tr><td></td><td></td><td>22 19¼</td><td></td><td></td><td>☉'s 2d Limb.</td></tr><tr><td>July 27.</td><td>23 0</td><td>8 24 0¼</td><td>27 14¼</td><td></td><td>☉'s 1st Limb.</td></tr><tr><td></td><td></td><td>16 14¼</td><td></td><td></td><td>☉'s 2d Limb.</td></tr></table> We then compared the Watch with the Clock as follows : <table><tr><th>Time by the Clock.</th><th>Time by Watch K.</th><th></th></tr><tr><td>H</td><td>H</td><td></td></tr><tr><td>10 5 0</td><td>2 6 56¼</td><td>By W. Wales.</td></tr><tr><td>6 0</td><td>7 56</td><td>By Mr. Witchell.</td></tr><tr><td>7 0</td><td>8 55½</td><td>By Capt. Cook.</td></tr></table>											First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.				H				July 25.	15 8¼	8 16 9¼			☉'s 1st Limb.			18 23	19 23¼		☉'s 2d Limb.	July 26.	18 5	8 20 5½	23 19½	24 19½	☉'s 1st Limb.			22 19¼			☉'s 2d Limb.	July 27.	23 0	8 24 0¼	27 14¼		☉'s 1st Limb.			16 14¼			☉'s 2d Limb.	Time by the Clock.	Time by Watch K.		H	H		10 5 0	2 6 56¼	By W. Wales.	6 0	7 56	By Mr. Witchell.	7 0	8 55½	By Capt. Cook.
First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.																																																																					
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7 0	8 55½	By Capt. Cook.																																																																							

1775.

Mr. Witchell, Head Master of the Royal Academy at Portsmouth, has since favoured me with the following Observations.

	First Wire.	Second Wire.	Middle Wire.	Fourth Wire.	Fifth Wire.	
	" "	" "	H " "	" "	" "	
July 31.	37 37 $\frac{1}{4}$	38 37 $\frac{1}{2}$	8 39 37 $\frac{1}{4}$			☉'s 1st Limb.
			41 50 $\frac{1}{4}$	42 50 $\frac{1}{4}$	43 50 $\frac{1}{4}$	☉'s 2d Limb.
Aug. 1.	41 31	42 30 $\frac{1}{4}$	8 43 30 $\frac{1}{2}$			☉'s 1st Limb.
			45 43 $\frac{1}{4}$	46 42 $\frac{1}{4}$	47 42 $\frac{1}{4}$	☉'s 2d Limb.

Hence it appears, that the Watch was too fast for mean time, at Portsmouth, by 0 h. 33' 1 $\frac{1}{4}$ ", and of course it gave the longitude of Portsmouth 1° 22' 56 $\frac{1}{4}$ " West of Greenwich, according to the mode of reckoning I have followed since leaving the Cape of Good Hope. The true longitude of the Observatory at Portsmouth is 1° 6' 15" West, and therefore the error of the Watch in our run from the Cape, is 0° 16' 41 $\frac{1}{2}$ ". If we suppose it to have gone all the voyage at the rate it went at Greenwich before its setting out, it will place Portsmouth 316° 10' 18 $\frac{1}{2}$ " East of Drake's Island, instead of 360° + 3° 9' 52 $\frac{1}{2}$ ", consequently the total error of the Watch in the whole voyage, or three years and twenty days, is 46° 59' 34". Moreover, seeing that the Watch was too fast for mean time as above, if we allow it to have gained 13",528 each day since leaving Fayal, as it was found to do there, the difference of longitude between that place and Portsmouth will be 27° 34' 35 $\frac{1}{2}$ "; that is, 28° 41' 5 $\frac{1}{2}$ " between Fayal and Greenwich; Fayal being so much to the West.

On Monday I brought the Watch up to London with me in a post-chaise; and on Tuesday, August 1, carried it down to Greenwich in a coach, and delivered it to the Rev. Mr. Maskelyne, his Majesty's Astronomer Royal. On comparing it with the Transit Clock there, we found that the Watch shewed 0 h. 56', when the Transit Clock shewed 9 h. 3' 24": The Sun's transit that day was at 8 h. 42' 18".36; from whence it appears that the mean time of comparing the Watch was 0 h. 26' 55".6, and of course that the Watch was too fast for mean time at Greenwich by 0 h. 29' 4".4; and therefore allowing its Fayal rate, it makes the difference of Longitude between Portsmouth and Greenwich 4' 23".85 in time, or 1° 5' 51".

The Rev. Mr. Maskelyne found that this Watch lost at the rate of 0 $\frac{1}{2}$ " a day on mean time between March 24th and April 25th 1772, before it went on the voyage; and that it gained at the rate of 13",0 a day from August 1st to September 1st 1775, after its return.

From the preceding account it appears to what an amazing degree of accuracy the ingenious Inventor of this Watch had brought this branch of mechanics so long ago as the year 1762, or 3; and at the same time what room is yet left for future improvements by other Artists: but let no man boast that he has excelled him, until his machines have undergone as rigorous a trial as this has done.

Comparisons of the Time-keepers with each other.

Comparisons of Mr. Arnold's Watches, Nos. 1 and 2 with each other.

1772.	Time by Watch No. 1.		Time by Watch No. 2.		1772.	Time by Watch No. 1.		Time by Watch No. 2.			
	H	"	H	"		H	"	H	"		
♀ July 10.	Both Watches were set 12" too slow for mean time.								♂ Aug. 18.	1 46 0	2 39 34
h ——— 11.	No. 2 stopped.								♀ ——— 19.	1 53 0	2 46 40
○ ——— 12.	0 30 0		1 23 45		h ——— 20.	1 24 0		2 17 49			
h ——— 13.	0 29 4		1 23 0		♀ ——— 21.	2 7 0		3 0 54 ¹ / ₂			
♂ ——— 14.	0 43 0		1 37 0 ¹ / ₂		h ——— 22.	1 33 0		2 27 4			
♀ ——— 15.	0 34 48		1 29 0		○ ——— 23.	1 10 0		2 4 14 ¹ / ₂			
h ——— 16.	0 32 43		1 27 0		h ——— 24.	1 16 0		2 10 22			
♀ ——— 17.	1 1 39 ¹ / ₂		1 56 0		♂ ——— 25.	1 8 0		2 2 25			
h ——— 18.	0 55 37 ¹ / ₂		1 50 0		♀ ——— 26.	0 59 0		1 53 31 ¹ / ₂			
○ ——— 19.	0 56 43 ¹ / ₂		1 51 0		h ——— 27.	1 0 0		1 54 41			
h ——— 20.	0 51 48 ¹ / ₂		1 46 0		♀ ——— 28.	1 6 0		2 0 49 ¹ / ₂			
♂ ——— 21.	1 10 47 ¹ / ₂		2 5 0		h ——— 29.	0 36 0		1 30 58 ¹ / ₂			
♀ ——— 22.	1 14 51 ¹ / ₂		2 9 0		○ ——— 30.	0 42 0		1 37 10			
h ——— 23.	1 14 53		2 9 0		h ——— 31.	0 50 0		1 45 19			
♀ ——— 24.	1 14 51		2 9 0		♂ Sept. 1.	0 21 0		1 16 20			
h ——— 25.	1 17 50		2 12 0		♀ ——— 2.	0 45 0		1 40 26			
○ ——— 26.	1 21 48		2 16 0		h ——— 3.	0 53 0		1 48 29			
h ——— 27.	1 9 47		2 4 0		♀ ——— 4.	0 31 0		1 26 34			
♂ ——— 28.	1 57 46 ¹ / ₂		2 52 0		h ——— 5.	0 37 0		1 32 50 ¹ / ₂			
♀ ——— 29.	0 47 46 ¹ / ₂		1 42 0		○ ——— 6.	0 38 0		1 34 13			
h ——— 30.	1 26 0		0 20 16		h ——— 7.	0 27 0		1 23 29 ¹ / ₂			
♀ ——— 31.	0 59 0		1 53 12 ¹ / ₂		♂ ——— 8.	0 28 0		1 24 36			
h Aug. 1.	0 37 0		1 31 7		♀ ——— 9.	1 1 0		1 57 42			
○ ——— 2.	1 36 0		2 29 59 ¹ / ₂		h ——— 10.	0 43 0		1 39 49 ¹ / ₂			
h ——— 3.	1 29 0		2 22 55 ¹ / ₂		♀ ——— 11.	0 53 0		1 49 51			
♂ ——— 4.	1 34 0		2 27 55 ¹ / ₂		h ——— 12.	1 10 0		2 7 2 ¹ / ₂			
♀ ——— 5.	1 31 0		2 24 54 ¹ / ₂		○ ——— 13.	0 59 0		1 55 57			
h ——— 6.	1 53 0		2 46 55		h ——— 14.	0 43 0		1 40 22 ¹ / ₂			
♀ ——— 7.	1 32 0		2 25 55		♂ ——— 15.	1 21 0		2 18 31 ¹ / ₂			
h ——— 8.	1 31 0		2 24 56		♀ ——— 16.	1 0 0		1 57 45 ¹ / ₂			
○ ——— 9.	1 44 0		2 37 50		h ——— 17.	1 9 0		2 7 4			
h ——— 10.	1 47 0		2 40 48		♀ ——— 18.	1 7 0		2 5 5 ¹ / ₂			
♂ ——— 11.	2 9 0		3 2 48 ¹ / ₂		h ——— 19.	0 56 0		1 54 16			
♀ ——— 12.	1 41 0		2 34 46 ¹ / ₂		○ ——— 20.	1 30 0		2 28 17			
h ——— 13.	1 44 0		2 37 37 ¹ / ₂		h ——— 21.	1 26 0		2 24 17			
♀ ——— 14.	2 8 0		3 1 30		♂ ——— 22.	1 8 0		2 6 19			
h ——— 15.	2 5 0		2 58 29 ¹ / ₂		♀ ——— 23.	1 27 0		2 25 55 ¹ / ₂			
○ ——— 16.	2 5 0		2 58 29		h ——— 24.	1 11 0		2 9 35 ¹ / ₂			
h ——— 17.	2 54 0		3 47 34		♀ ——— 25.	1 34 0		2 31 21			
					h ——— 26.	1 23 0		2 20 27			

Comparisons of the Watch K. with Mr. Arnold's No. 3.

1772.	Time by A, No. 3.			Time by Watch K.			1772.	Time by A, No. 3.			Time by Watch K.		
	H	'	"	H	'	"		H	'	"	H	'	"
○ Aug. 9.	0	56	0	1	23	24½	♂ Sept. 22.	23	45	0	1	14	23
▷ — 10.	0	58	0	1	26	50½	♀ — 23.	23	49	0	1	19	49
♂ — 11.	1	1	0	1	31	15	♂ — 24.	23	49	0	1	21	16
♀ — 12.	1	4	0	1	35	41	♀ — 25.	23	56	0	1	29	44
♂ — 13.	2	2	0	2	35	13	♂ — 26.	23	48	0	1	23	10
♀ — 14.	1	2	0	1	36	38½	○ — 27.	23	41	0	1	17	25½
♂ — 15.	1	15	0	1	51	7½	▷ — 28.	23	46	0	1	23	40½
○ — 16.	1	0	0	1	37	35	♂ — 29.	23	31	0	1	9	54½
▷ — 17.	0	47	0	1	26	3½	♀ — 30.	23	32	0	1	12	21
♂ — 18.	0	43	0	1	23	29	♂ Oct. 1.	23	17	0	0	58	50
♀ — 19.	1	11	0	1	52	49½	♀ — 2.	23	18	0	1	1	1
♂ — 20.	1	23	0	2	6	6	♂ — 3.	23	1	0	0	45	22½
♀ — 21.	0	35	0	1	19	18½	○ — 4.	22	50	0	0	35	41
♂ — 22.	0	22	0	1	7	35½	▷ — 5.	22	41	0	0	27	55
○ — 23.	0	18	0	1	4	50½	♂ — 6.	22	44	0	0	32	9½
▷ — 24.	0	8	0	0	56	8½	♀ — 7.	22	45	0	0	34	20½
♂ — 25.	0	7	0	0	56	26½	♂ — 8.	22	43	0	0	33	40
♀ — 26.	23	55	0	0	45	43	♀ — 9.	22	43	0	0	35	10½
♂ — 27.	23	54	0	0	46	0½	♂ — 10.	22	26	0	0	19	33
♀ — 28.	23	45	0	0	38	16	○ — 11.	22	29	0	0	23	44½
♂ — 29.	23	37	0	0	31	36	▷ — 12.	22	18	0	0	13	53
○ — 30.	23	37	0	0	33	0½	♂ — 13.	22	6	0	0	3	6
▷ — 31.	23	20	0	0	17	20½	♀ — 14.	22	2	0	0	0	20
♂ Sept. 1.	23	22	0	0	20	48	♂ — 15.	21	53	0	23	52	34½
♀ — 2.	23	21	0	0	21	5½	♀ — 16.	21	37	0	23	37	48
♂ — 3.	23	27	0	0	28	19½	♂ — 17.	21	21	0	23	22	59½
♀ — 4.	23	28	0	0	30	28	○ — 18.	21	21	0	23	24	7½
♂ — 5.	23	37	0	0	40	34	▷ — 19.	21	4	0	23	8	15½
○ — 6.	23	26	0	0	30	48½	♂ — 20.	21	4	0	23	9	27½
▷ — 7.	23	18	0	0	24	7½	♀ — 21.	21	4	0	23	10	38
♂ — 8.	23	30	0	0	37	46	♂ — 22.	21	0	0	23	7	47
♀ — 9.	23	21	0	0	30	24	♀ — 23.	20	58	0	23	7	0
♂ — 10.	23	23	0	0	33	49½	♂ — 24.	20	42	0	22	52	23½
♀ — 11.	23	36	0	0	48	28½	○ — 25.	20	32	0	22	43	47
♂ — 12.	23	26	0	0	40	13½	▷ — 26.	20	29	0	22	42	9½
○ — 13.	23	35	0	0	50	58½	♂ — 27.	20	24	0	22	38	29½
▷ — 14.	23	36	0	0	53	29½	♀ — 28.	20	20	0	22	35	56½
♂ — 15.	23	42	0	1	1	20	♂ — 29.	20	19	0	22	36	26
♀ — 16.	23	48	0	1	9	9	♀ — 30.	20	9	0	22	28	2½
♂ — 17.	23	40	0	1	2	40	♂ — 31.	20	13	0	22	33	28½
♀ — 18.	23	53	0	1	17	4½	○ Nov. 1.	20	20	0	22	41	59
♂ — 19.	23	38	0	1	3	34½	▷ — 2.	19	49	0	22	12	21½
○ — 20.	23	42	0	1	9	12½	♂ — 16.	20	38	0	23	23	5½
▷ — 21.	23	48	0	1	16	21½	♀ — 18.	22	36	0	22	35	1½

ON BOARD THE RESOLUTION.

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Comparisons of the Watches with each other.

1773.	Time by A, N ^o . 3.			Time by Watch K.	1773.	Time by A, N ^o . 3.			Time by Watch K.
	H	"				H	"		
☉ Feb. 14.	17	5	0	19 13 0 $\frac{1}{2}$	♂ March 30.	10	25	0	13 44 59
☽ — 15.	17	14	0	19 23 38	♀ — 31.	9	31	0	12 52 34 $\frac{1}{2}$
♂ — 16.	16	57	0	19 8 16	♂ April 1.	10	32	0	13 55 54
♀ — 17.	17	29	0	19 41 57 $\frac{1}{2}$	♀ — 2.	9	51	0	13 16 22 $\frac{1}{2}$
♂ — 18.	16	27	0	18 41 32	♂ — 3.	9	41	0	13 8 12 $\frac{1}{2}$
♀ — 19.	15	59	0	18 15 8	☉ — 4.	9	33	0	13 2 6
♂ — 20.	15	52	0	18 9 43 $\frac{1}{2}$	☽ — 5.	10	16	0	13 47 2 $\frac{1}{2}$
☉ — 21.	15	45	0	18 4 23	♂ — 6.	9	35	57 $\frac{1}{2}$	13 8 47 $\frac{1}{2}$
☽ — 22.	15	29	0	17 50 1 $\frac{1}{2}$	♀ — 7.	9	41	13 $\frac{1}{2}$	13 15 52 $\frac{1}{2}$
♂ — 23.	15	31	0	17 53 41 $\frac{1}{2}$	♂ — 8.	9	27	33 $\frac{1}{2}$	13 3 59 $\frac{1}{2}$
♀ — 24.	15	19	0	17 43 19 $\frac{1}{2}$	♀ — 9.	9	33	45 $\frac{1}{2}$	13 12 3 $\frac{1}{2}$
♂ — 25.	15	21	0	17 47 0 $\frac{1}{2}$	☉ — 10.	9	20	7	13 0 13 $\frac{1}{2}$
♀ — 26.	15	7	0	17 34 42	☽ — 11.	9	21	18 $\frac{1}{2}$	13 2 20 $\frac{1}{2}$
♂ — 27.	15	3	0	17 32 21	☉ — 12.	9	31	36 $\frac{1}{2}$	13 15 24 $\frac{1}{2}$
☉ — 28.	14	38	0	17 8 53	♂ — 13.	9	44	46 $\frac{1}{2}$	13 30 28 $\frac{1}{2}$
☽ March 1.	14	28	0	17 0 25 $\frac{1}{2}$	♀ — 14.	9	3	17	12 50 43 $\frac{1}{2}$
♂ — 2.	14	35	0	17 8 57	♂ — 15.	9	34	32 $\frac{1}{2}$	13 23 46 $\frac{1}{2}$
♀ — 3.	14	26	0	17 1 31 $\frac{1}{2}$	♀ — 16.	9	12	56	13 3 57 $\frac{1}{2}$
♂ — 4.	14	4	0	16 41 9 $\frac{1}{2}$	♂ — 17.	9	2	17	12 55 12 $\frac{1}{2}$
♀ — 5.	13	55	0	16 33 49	☉ — 18.	9	25	33 $\frac{1}{2}$	13 20 12 $\frac{1}{2}$
♂ — 6.	13	39	0	16 19 32 $\frac{1}{2}$	☽ — 19.	8	53	9	12 49 31 $\frac{1}{2}$
☉ — 7.	13	25	0	16 7 13 $\frac{1}{2}$	♂ — 20.	9	19	18 $\frac{1}{2}$	13 17 34
☽ — 8.	13	22	0	16 5 57	♀ — 21.	9	0	49 $\frac{1}{2}$	13 0 42 $\frac{1}{2}$
♂ — 9.	13	19	0	16 4 35	♂ — 22.	9	2	0	13 3 37
♀ — 10.	12	54	0	15 41 5 $\frac{1}{2}$	♀ — 23.	9	47	0	12 50 22 $\frac{1}{2}$
♂ — 11.	12	51	0	15 39 39	♂ — 24.	8	58	0	13 3 4 $\frac{1}{2}$
♀ — 12.	12	36	0	15 26 17	☉ — 25.	8	37	0	12 43 57 $\frac{1}{2}$
♂ — 13.	12	28	0	15 19 56	☽ — 26.	9	58	0	14 6 42 $\frac{1}{2}$
☉ — 14.	12	17	0	15 10 35 $\frac{1}{2}$	♂ — 27.	8	45	0	12 55 20 $\frac{1}{2}$
☽ — 15.	11	57	0	14 52 10 $\frac{1}{2}$	♀ — 28.	10	5	0	14 17 11 $\frac{1}{2}$
♂ — 16.	11	40	0	14 36 42 $\frac{1}{2}$	♂ — 29.	8	57	0	13 10 54
♀ — 17.	11	40	0	14 38 17 $\frac{1}{2}$	♀ — 30.	8	39	0	12 54 34 $\frac{1}{2}$
♂ — 18.	11	14	0	14 13 54	♂ May 1.	10	48	0	15 5 29 $\frac{1}{2}$
♀ — 19.	11	11	0	14 12 29	☉ — 2.	8	26	0	12 45 13 $\frac{1}{2}$
♂ — 20.	10	56	0	13 59 4	☽ — 3.	5	15	0	9 35 53 $\frac{1}{2}$
☉ — 21.	10	42	0	13 46 38	♂ — 4.	6	52	0	11 14 42 $\frac{1}{2}$
☽ — 22.	10	35	0	13 41 19 $\frac{1}{2}$	♀ — 5.	8	18	0	12 42 22
♂ — 23.	10	21	0	13 29 4	♂ — 6.	8	46	0	13 12 6 $\frac{1}{2}$
♀ — 24.	10	0	0	13 9 37 $\frac{1}{2}$	♀ — 7.	8	23	0	12 50 47 $\frac{1}{2}$
♂ — 25.	10	9	0	13 20 21 $\frac{1}{2}$	♂ — 8.	8	27	0	12 56 23 $\frac{1}{2}$
♀ — 26.	10	54	0	14 7 1	☉ — 9.	8	38	0	13 8 59 $\frac{1}{2}$
♂ — 27.	10	30	0	13 44 42	☽ — 10.	8	22	0	12 54 23 $\frac{1}{2}$
☉ — 28.	9	39	0	12 55 30 $\frac{1}{2}$	♂ — 11.	8	45	0	13 18 55
☽ — 29.	12	14	0	15 23 27 $\frac{1}{2}$	♀ — 12.	8	27	0	13 2 24 $\frac{1}{2}$

Comparisons of the Watches with each other.

1773.	Time by A, N ^o . 3.			Time by Watch K.			1773.	Time by A, N ^o . 3.			Time by Watch K.		
	H	'	"	H	'	"		H	'	"	H	'	"
♂ May 13.	8	21	0	12	58	0 $\frac{1}{2}$	♂ May 26.	7	27	0	12	26	37 $\frac{1}{4}$
♀ — 14.	8	14	0	12	52	39	♂ — 27.	8	18	0	13	19	26 $\frac{1}{4}$
♂ — 15.	8	8	0	12	48	12 $\frac{1}{4}$	♀ — 28.	7	48	0	12	50	55
⊙ — 16.	7	58	0	12	39	57	♂ — 29.	7	30	0	12	34	34
♂ — 17.	7	51	0	12	34	39 $\frac{1}{4}$	⊙ — 30.	9	57	0	15	3	16 $\frac{1}{4}$
♂ — 18.	7	44	0	12	29	15	♂ — 31.	7	19	0	12	26	48 $\frac{1}{4}$
♀ — 19.	8	35	0	13	21	56	♂ June 1.	9	22	0	14	31	37
♂ — 20.	8	48	0	13	36	37 $\frac{1}{2}$	♀ — 2.	8	43	0	13	54	6 $\frac{1}{2}$
♀ — 21.	8	14	0	13	4	26 $\frac{1}{4}$	♂ — 3.	7	32	0	12	45	6 $\frac{1}{4}$
♂ — 22.	7	15	0	12	7	16 $\frac{1}{4}$	♀ — 4.	7	58	0	13	13	6 $\frac{1}{4}$
⊙ — 23.	7	18	0	12	12	12 $\frac{1}{2}$	♂ — 5.	8	7	0	13	24	5 $\frac{1}{2}$
♂ — 24.	8	50	0	13	46	8 $\frac{1}{2}$	⊙ — 6.	7	7	0	12	25	48 $\frac{1}{2}$
♂ — 25.	7	29	0	12	26	55 $\frac{1}{2}$	♂ — 7.	7	24	0	12	44	43 $\frac{1}{4}$

Comparisons of the Watch K with Mr. Arnold's Watch No. 1.

1772.	Time by Watch K.			Time by Watch N ^o . 1.			1773.	Time by Watch K.			Time by Watch N ^o . 1.		
	H	'	"	H	'	"		H	'	"	H	'	"
♂ July 21.	5	29	43 $\frac{2}{3}$	5	29	0	♀ Jan. 8.	19	52	0	19	7	10
♂ Aug. 12.	5	6	0	5	4	21	♂ May 20.	16	26	28 $\frac{1}{4}$	14	38	0
⊙ — 30.	6	19	57	6	17	0	♂ June 22.	9	8	0	7	0	33 $\frac{1}{4}$
⊙ Sept. 13.	22	21	13 $\frac{1}{4}$	22	16	0	♂ July 6.	7	56	58 $\frac{1}{4}$	5	41	0
♂ — 26.	23	1	47	22	54	0	♀ — 28.	7	38	34 $\frac{1}{2}$	7	5	0
♂ Oct. 12.	3	0	0	2	49	24 $\frac{1}{2}$	♂ Aug. 5.	8	6	51	5	28	0
♂ — 19.	21	30	0	21	17	9 $\frac{1}{4}$	♂ — 14.	8	47	11 $\frac{1}{4}$	6	0	0
♂ Dec. 14.	20	41	50 $\frac{1}{2}$	20	9	0	♂ — 19.	5	36	47	2	45	0
♂ — 22.	19	51	38 $\frac{1}{4}$	19	15	0	♂ Oct. 4.	8	38	52	5	4	0

O B S E R V A T I O N S

O F T H E

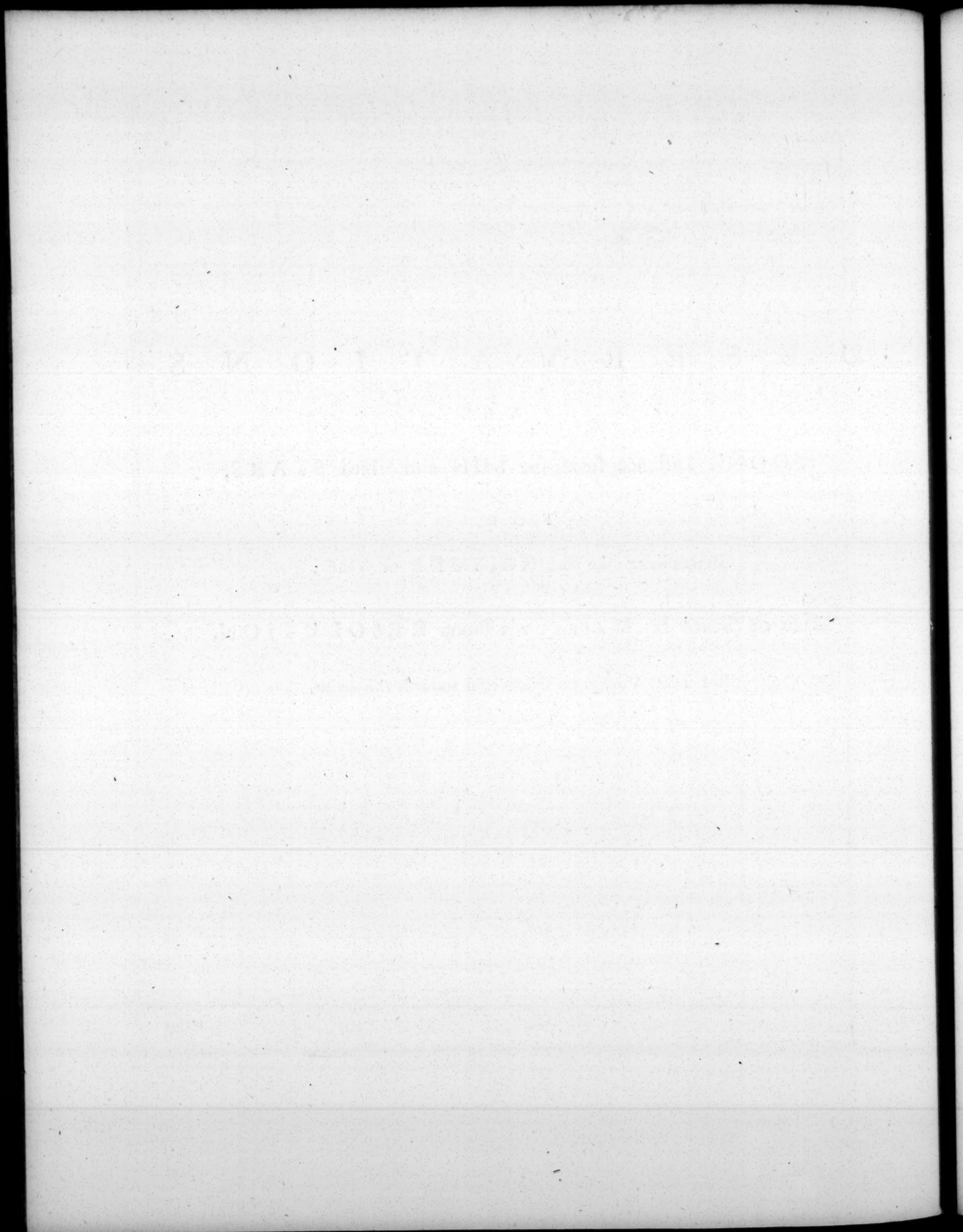
M O O N ' s D i s t a n c e f r o m t h e S U N a n d F i x e d S T A R S ,

F O R

D e t e r m i n i n g t h e L O N G I T U D E a t S E A ;

M a d e o n B o a r d h i s M A J E S T Y ' s S l o o p R E S O L U T I O N ,

I n h e r l a t e V o y a g e o n D i s c o v e r i e s t o w a r d s t h e S o u t h .



ON BOARD THE RESOLUTION.

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1772.	Time by Watch K.	Altitude of the ☉'s L. L. or *.	Moon's Alti- tude.	Distance of the ☉'s L. from ☉'s or *.	Latitude of the Ship N.	Longitude West of Greenwich.	Thermom.	No. of Obs.	Objects.
H									
♂ July 21.	19 57 50	29 51	45 30 U.	95 21 30	43 41 $\frac{2}{3}$	9 59 $\frac{1}{2}$		2	☉ and ☉: Cloudy.
	21 50 4 $\frac{1}{2}$	49 47	28 4 $\frac{2}{3}$ U.	94 42 36	43 40	9 40 $\frac{1}{2}$		5	☉ and ☉.
	22 18 11 $\frac{1}{2}$	54 25 $\frac{2}{3}$	23 7 U.	94 32 50	43 38 $\frac{1}{2}$	9 42 $\frac{1}{2}$		3	☉ and ☉.
♀ — 22.	18 59 48	18 44 $\frac{2}{3}$	59 4 U.	84 35 0	42 41 $\frac{1}{3}$	10 9 $\frac{1}{2}$		3	☉ and ☉.
	19 5 34	19 46 $\frac{1}{3}$	58 56 $\frac{2}{3}$ U.	84 33 50	42 41 $\frac{1}{3}$	9 57 $\frac{1}{2}$		3	☉ and ☉.
♂ — 23.	19 17 13 $\frac{1}{2}$	20 25 $\frac{2}{3}$	64 41 $\frac{1}{3}$ U.	73 13 54	40 32	11 24 $\frac{1}{2}$	65 $\frac{1}{2}$	5	☉ and ☉.
♂ Aug. 4.	3 56 50 $\frac{1}{3}$	48 16 $\frac{2}{3}$	44 40 $\frac{1}{2}$ U.	72 35 40	28 28 $\frac{3}{4}$	17 36 $\frac{1}{2}$	76 $\frac{1}{2}$	6	☉ and ☉: Very hazy.
♀ — 5.	4 12 31	45 4	36 45 U.	85 59 0	27 38 $\frac{1}{2}$	18 55 $\frac{1}{2}$	77 $\frac{1}{2}$	3	☉ and ☉.
♀ — 7.	Evening.	9 22 $\frac{1}{3}$	42 22 $\frac{2}{3}$ U.	112 48 35	23 34 $\frac{1}{2}$	19 50		3	☉ and ☉.
♂ — 18.	20 10 45 $\frac{1}{2}$	16 56 $\frac{2}{3}$	47 5 U.	114 1 47	10 50	19 16 $\frac{1}{2}$	80	7	☉ and ☉.
♀ — 22.	20 6 50 $\frac{1}{2}$	19 18 $\frac{1}{3}$	77 43 $\frac{2}{3}$ L.	68 32 30	6 57 $\frac{1}{3}$	16 41 $\frac{1}{2}$	80	5	☉ and ☉.
☉ — 23.	20 28 18	25 48	76 11 L.	56 16 45	6 29	14 54	78	1	☉ and ☉.
	20 50 45	31 21 $\frac{1}{2}$	77 35 $\frac{1}{2}$ L.	56 10 52	6 29	14 59	78	4	☉ and ☉.
♀ Sept. 4.	2 36 11	54 42 $\frac{1}{2}$	29 52 $\frac{2}{3}$ U.	94 26 42	0 49	9 45 $\frac{1}{2}$		6	☉ and ☉.
	3 16 46	44 48	38 54	94 42 30	0 49	9 45 $\frac{1}{2}$		6	☉ and ☉.
♀ — 5.	3 9 36	46 33	25 17 $\frac{1}{2}$ U.	107 5 24	0 54 $\frac{1}{3}$	9 49 $\frac{1}{2}$		7	☉ and ☉.
	4 7 16	31 58	38 9 $\frac{1}{2}$ U.	107 27 17	0 54 $\frac{1}{3}$	9 47 $\frac{1}{2}$		4	☉ and ☉.
☉ — 6.	4 9 58 $\frac{1}{2}$	30 32 $\frac{1}{2}$	28 8 $\frac{1}{2}$ U.	119 33 28	0 31	8 9 $\frac{1}{2}$		8	☉ and ☉: Very Cloudy.
☉ — 7.	7 33 36 $\frac{1}{2}$		62 59 $\frac{1}{2}$ U.	52 47 0 †	0 18	7 40 $\frac{1}{2}$		4	☉ & Antares.
♂ — 8.	8 2 16	43 31 $\frac{1}{2}$	59 16 $\frac{1}{2}$ U.	65 26 48 †	South.	9 14 $\frac{1}{2}$		5	☉ & Antares.
♀ — 12.	9 5 0	76 21	28 24 $\frac{2}{3}$ L.	65 14 20 †	5 0	14 52 $\frac{1}{2}$		9	☉ & α Aquilæ.
	17 24 18 $\frac{1}{2}$	69 5 $\frac{1}{2}$	28 57 $\frac{1}{2}$ L.	62 52 8 †	5 0	14 14 $\frac{1}{2}$		5	☉ and Al-debaran.
♂ — 17.	21 24 13 $\frac{1}{2}$	36 50 $\frac{4}{5}$	22 56 U.	110 15 42	12 16 $\frac{1}{2}$	17 50		14	☉ and ☉.
♀ — 19.	20 18 32	19 31 $\frac{1}{2}$	51 9 $\frac{3}{4}$ U.	87 26 35	15 24	19 54		6	☉ & ☉: Great mot. & hazy.
	22 1 39 $\frac{1}{2}$	43 47	35 0 $\frac{3}{4}$ U.	86 56 47	15 33	20 12		6	☉ & ☉: Violent mot.
☉ — 21.	21 31 20 $\frac{1}{3}$	35 18 $\frac{2}{3}$	54 31 $\frac{1}{2}$ U.	62 26 10	18 30	21 12 $\frac{1}{2}$		10	☉ and ☉.
♂ — 29.	8 13 47 $\frac{1}{2}$	55 11 $\frac{1}{3}$	22 51 $\frac{1}{2}$ L.	73 37 11 †				7	☉ & α Aquilæ. Very hazy.
♂ Oct. 1.	3 59 37 $\frac{1}{2}$	37 17 $\frac{2}{3}$	73 21 $\frac{2}{3}$ U.	64 11 23	27 29	17 45		5	☉ & ☉: Ramfden's Quad.
	4 4 28	35 59 $\frac{2}{3}$	74 31 $\frac{1}{2}$ U.	64 13 15	27 29	17 42		6	☉ & ☉: Mr. Smith's ditto.
	4 38 47 $\frac{1}{2}$	29 1	79 44 $\frac{1}{3}$ U.	64 24 15	27 28 $\frac{1}{2}$	18 3		5	☉ & ☉: Mr. Clerke's ditto.
		21 26	80 44 $\frac{1}{3}$ U.	64 32 57	27 28 $\frac{1}{2}$	17 14 $\frac{1}{2}$		5	☉ & ☉: Dol-lond's ditto.
♀ — 2.	3 12 36 $\frac{1}{2}$	46 3 $\frac{2}{3}$	53 13 $\frac{1}{3}$ U.	76 53 20	27 44 $\frac{1}{3}$	16 39 $\frac{1}{2}$		6	☉ and ☉.
♀ — 3.	3 26 30	41 59	45 22 U.	89 29 7 $\frac{1}{2}$	28 14 $\frac{2}{3}$	15 39		4	☉ and ☉.
☉ — 5.	4 4 33	30 5 $\frac{1}{2}$	33 56 U.	113 29 59	28 54 $\frac{1}{3}$	11 9 $\frac{1}{2}$		14	☉ & ☉: Very uncert.

1772.	Time by Watch K.		Altitude of the ☉'s L. L. or *.	Moon's Altitude.	Distance of ☉'s L. from ☉'s or Star.	Latitude of the Ship S.	Longitude West of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	M								
☉ Oct. 5.	4	9 41 $\frac{1}{2}$	29 40 $\frac{3}{4}$	35 0 $\frac{3}{4}$ U.	113 32 48	28 54 $\frac{1}{3}$	11 35		5	☉ and ☉: Lefts uncert.
☿ — 10.	7	58 58 $\frac{1}{2}$	42 53 $\frac{1}{10}$	27 29 $\frac{1}{6}$ L.	72 24 2 †		6 52 $\frac{1}{2}$		9	☉ and ☉ Aquilæ.
☽ — 11.	8	5 50 $\frac{1}{2}$	40 52	19 0 $\frac{1}{8}$ L.	83 14 15 †		5 51		8	☉ and ☉ Aquilæ.
	13	37 19 $\frac{1}{2}$	35 4	41 0 $\frac{1}{7}$ L.	43 30 7 †		6 35 $\frac{1}{2}$ East.		7	☉ and Al- debaran.
☿ — 16.	18	44 43	23 42 $\frac{2}{10}$	18 11 $\frac{2}{3}$ U.	118 30 6	35 1	4 7 $\frac{1}{2}$	57	5	☉ and ☉: Cloudy.
☉ — 19.	15	25 10 $\frac{2}{3}$	33 25	31 23 $\frac{1}{3}$ L.	56 25 30 †		8 16 $\frac{1}{2}$		3	☉ and Al- debaran.
	18	52 13 $\frac{1}{2}$	29 34	37 43 $\frac{1}{2}$ U.	82 36 57	34 41 $\frac{5}{8}$	7 47 $\frac{1}{2}$		4	☉ and ☉.
			44 18 $\frac{1}{3}$	29 45 $\frac{1}{6}$ U.	82 11 54	34 43	7 48 $\frac{1}{2}$		6	☉ and ☉.
☿ — 20.	18	13 21	21 42 $\frac{2}{3}$	43 22 $\frac{1}{2}$ U.	70 5 7	35 20 $\frac{1}{2}$	8 5 $\frac{1}{4}$	60 $\frac{1}{2}$	6	☉ and ☉.
	20	15 37	45 54 $\frac{1}{2}$	37 20 U.	69 22 52	35 26 $\frac{2}{3}$	7 56	60 $\frac{1}{2}$	6	☉ and ☉.
☿ Dec. 4.	2	25 56	35 30 $\frac{2}{3}$	17 42 $\frac{1}{3}$ U.	118 16 30	46 0	17 51		6	☉ and ☉: A great sea.
1773.										
☿ Jan. 2.	4	6 48	27 0 $\frac{1}{2}$	15 17 $\frac{3}{4}$ U.	108 58 49	58 52 $\frac{1}{2}$	10 42	31 $\frac{1}{4}$	9	☉ and ☉: Dollond's Q.
	4	29 13 $\frac{1}{2}$	24 3 $\frac{1}{2}$	16 41 $\frac{2}{3}$ U.	109 10 51	58 52 $\frac{1}{2}$	8 41 $\frac{1}{2}$	31 $\frac{1}{4}$	5	☉ and ☉: C. Cook's Q.
☿ — 13.	16	38 56	27 34	19 4 U.	112 31 34	64 1			1	☉ and ☉.
	17	0 24 $\frac{1}{3}$	29 55 $\frac{2}{3}$	17 19 $\frac{1}{12}$ U.	112 23 9	64 1	39 29 $\frac{1}{4}$		6	☉ and ☉.
	17	9 5	30 49 $\frac{2}{3}$	16 39 $\frac{1}{12}$ U.	112 19 44	64 1	39 49 $\frac{1}{2}$		6	☉ and ☉.
☿ — 14.	17	50 21 $\frac{1}{2}$	35 6	22 6 $\frac{1}{2}$ U.	98 53 45	63 32 $\frac{1}{2}$		35	2	☉ and ☉.
	18	8 45	36 55 $\frac{1}{2}$	20 25 $\frac{1}{3}$ U.	98 46 35	63 32 $\frac{1}{8}$	39 58 $\frac{1}{4}$	35	6	☉ and ☉: With a Teles.
	18	30 50	38 59 $\frac{2}{3}$	18 17 $\frac{1}{3}$ U.	98 32 30	63 32 $\frac{1}{8}$	38 35 $\frac{3}{8}$	35	6	☉ and ☉: Without.
☿ — 27.	23	48 11 $\frac{1}{2}$	37 15 $\frac{4}{5}$	31 45 $\frac{1}{3}$ U.	53 34 6	56 15	52 50	36	5	☉ and ☉: Dollond's Q.
	23	57 47 $\frac{1}{2}$	35 59 $\frac{1}{3}$	31 39 $\frac{1}{12}$ U.	53 40 45	56 14 $\frac{1}{2}$	51 7 $\frac{1}{2}$	36	3	☉ & ☉ } Ramd.
	0	23 52 $\frac{1}{2}$	32 48 $\frac{3}{4}$	31 21 $\frac{1}{3}$ U.	53 49 39	56 13 $\frac{1}{8}$	50 50	36	5	☉ & ☉ } Ramd.
☿ Feb. 11.	14	26 10	20 47 $\frac{2}{3}$	30 36 U.	118 28 57	52 28 $\frac{1}{8}$	70 30 $\frac{1}{8}$		5	☉ & ☉ } Ramd.
	15	18 8	28 42 $\frac{1}{3}$	23 19 $\frac{1}{3}$ U.	118 0 55	52 31 $\frac{3}{5}$	70 7		5	☉ & ☉ } Ramd.
	15	39 46 $\frac{1}{2}$	31 39 $\frac{3}{5}$	20 29 $\frac{2}{3}$ U.	117 50 57	52 32 $\frac{1}{3}$	70 12 $\frac{7}{8}$		5	☉ and ☉: Dollond's.
☿ — 12.	13	45 44	15 44 $\frac{4}{5}$	42 33 $\frac{1}{3}$ U.	105 20 24	53 34 $\frac{2}{3}$	72 24	34 $\frac{1}{2}$	5	☉ and ☉: Ditto.
	14	22 51	21 15	38 57 U.	105 6 48	53 37 $\frac{1}{6}$	73 10 $\frac{1}{4}$	34 $\frac{1}{2}$	5	☉ and ☉: Mr. Clerk's Q.
			34 37 $\frac{7}{8}$	27 4 $\frac{1}{4}$ U.	104 22 34	53 43 $\frac{5}{8}$	72 40 $\frac{1}{2}$	35	4	☉ & ☉ } Dolon.
			36 19 $\frac{2}{3}$	25 10 $\frac{5}{6}$ U.	104 15 43	53 43 $\frac{5}{8}$	72 29 $\frac{1}{2}$	35	3	☉ & ☉ } Dolon.

1773.	Time by Watch K.			Altitude of the ☉'s L. L. or *.	Moon's Altitude.	Distance of the Moon's L. from Sun or Star.	Latitude of the Ship S.	Longitude West of Greenwich	Thermom.	No. of Obs.	Objects.
	H	"	"								
☿ Feb. 17.	13	43	18	19 36	43 17 $\frac{1}{2}$ L.	40 52 8	57 53 $\frac{5}{8}$	83 1	32	4	☿ and ☉.
	13	59	51 $\frac{1}{2}$	21 49	44 31 L.	40 45 49	57 53 $\frac{5}{8}$	83 9 $\frac{1}{8}$	32	2	☿ and ☉.
☉ March 7.	2	6	9	20 27	20 6 $\frac{1}{2}$ L.	37 31 57 †		121 51 $\frac{1}{2}$		3	☿ and Pro- cyon.
☿ — 13.	13	47	21	32 23 $\frac{1}{2}$	11 8 $\frac{3}{4}$ U.	109 53 40 †		136 55 $\frac{1}{2}$		5	☿ and ☉.
	14	3	8	33 2 $\frac{3}{4}$	9 14 $\frac{3}{4}$ U.	109 43 40 †		136 46 $\frac{1}{2}$		5	☿ and ☉.
☉ May 16.	8	19	47	8 9 $\frac{3}{4}$	45 33 $\frac{1}{2}$ L.	50 49 20	40 25 $\frac{3}{4}$	173 25 $\frac{1}{2}$	51 $\frac{1}{2}$	5	☿ and ☉.
	9	50	45	20 54 $\frac{7}{8}$	44 54 L.	50 24 26	40 29 $\frac{1}{8}$	173 3 $\frac{3}{8}$	51 $\frac{1}{2}$	5	☿ and ☉.
☿ June 8.	22	29	7	70 9 $\frac{5}{8}$ T.	19 54 $\frac{3}{4}$ L.	59 32 8 †	42 21 $\frac{1}{2}$	175 30	51 $\frac{1}{2}$	7	☿ and An- tares.
☿ — 9.	9	52	52 $\frac{1}{2}$	15 43 $\frac{1}{2}$	14 56 $\frac{3}{8}$ U.	114 51 37	43 49 $\frac{5}{8}$	179 40 $\frac{2}{3}$	53 $\frac{1}{2}$	6	☿ and ☉.
				14 51 $\frac{1}{2}$	25 33 $\frac{1}{2}$ U.	79 57 11	46 8 $\frac{1}{2}$			4	☿ and ☉.
☿ — 12.	9	51	59	15 52 $\frac{1}{2}$	23 40 $\frac{3}{4}$ U.	79 53 4	46 8 $\frac{1}{2}$			5	☿ and ☉.
	9	59	29	16 24 $\frac{1}{2}$	22 33 U.	79 49 58	46 8 $\frac{1}{2}$			6	☿ and ☉.
☿ — 26.	11	25	53	22 54 $\frac{1}{2}$	16 34 U.	68 6 15 †		197 27 $\frac{7}{8}$	55	6	☿ and ☉.
☿ — 28.	18	35	37	60 29 $\frac{1}{2}$	47 25 $\frac{1}{2}$ U.	53 14 34 †		198 11 $\frac{1}{2}$	50 $\frac{1}{2}$	6	☿ and An- tares.
☿ — 29.	20	57	55 $\frac{1}{2}$	72 0 $\frac{3}{4}$	39 11 $\frac{1}{2}$ U.	38 12 1 †		199 19 $\frac{1}{2}$	51 $\frac{1}{2}$	6	☿ and An- tares.
☿ — 30.	19	44	30		57 2 U.	23 1 28 †	43 8 $\frac{1}{2}$	199 13 $\frac{1}{2}$		2	☿ and Spi- ca ♀.
☿ July 1.	19	25	40		61 47 $\frac{1}{2}$ L.	62 28 0 †	43 4	202 15 $\frac{1}{2}$		2	☿ and α A- quilæ: Ve- ry cloudy.
	19	41	43 $\frac{1}{2}$		61 52 $\frac{1}{2}$ L.	37 43 30 †	43 4	202 28 $\frac{1}{2}$		4	☿ and Spi- ca ♀.
☿ — 2.				4 12 $\frac{1}{2}$	12 35 $\frac{2}{3}$ U.	148 51 27	43 2 $\frac{3}{4}$	203 11 $\frac{1}{2}$		7	☿ and ☉: Back Obs.
☉ — 4.	17	11	6		21 9 $\frac{1}{4}$ L.	36 8 19 †		205 10 $\frac{1}{2}$	48 $\frac{1}{2}$	4	☿ and An- tares.
☿ — 6.	6	21	44 $\frac{1}{2}$	6 37	7 22 $\frac{6}{7}$ U.	147 24 57	41 23	209 4 $\frac{1}{2}$	51	7	☉ and ☿: Back Obs. Hazy.
☿ — 9.	6	18	16	8 35	20 44 U.	111 26 15	43 27		52	1	☿ and ☉.
☿ — 10.	6	44	49 $\frac{1}{2}$	13 8 $\frac{1}{2}$	18 59 U.	99 53 47 $\frac{1}{2}$	43 33 $\frac{1}{2}$	216 53 $\frac{1}{2}$		6	☿ and ☉: Dollond's Q.
				19 20 $\frac{1}{2}$	8 36 $\frac{1}{2}$ U.	99 31 15 $\frac{1}{2}$	43 33 $\frac{1}{2}$	218 17 $\frac{1}{2}$		2	☿ and ☉: Ramsden's.
☉ — 11.	6	14	37 $\frac{1}{2}$	10 37 $\frac{3}{4}$	26 19 $\frac{1}{2}$ U.	88 56 42	43 17 $\frac{1}{2}$	218 38	47	9	☿ and ☉: Dollond's.
	6	52	53	15 16 $\frac{5}{8}$	20 39 $\frac{1}{2}$ U.	88 45 57	43 17 $\frac{1}{2}$	219 50	47	8	☿ and ☉: Ramsden's.
☿ — 12.	2	41	45	63 28 $\frac{1}{2}$	33 53 $\frac{1}{2}$ L.	61 52 27 †		221 11 $\frac{1}{2}$	46	6	☿ and Fo- malhaut.
	5	46	59	7 46 $\frac{1}{2}$	31 10 $\frac{5}{8}$ U.	78 6 20	43 2 $\frac{1}{2}$	220 24 $\frac{1}{2}$	47 $\frac{1}{2}$	6	☿ and ☉: Dollond's Q.

1773.	Time by Watch K.	Altitude of the ☉'s L. or Star.	Moon's Altitude.	Distance of the ☉'s L. from ☉ or Star.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	°	°	°	°	°			
July 12.	7 3 32	17 13 $\frac{1}{2}$	21 59 $\frac{1}{2}$ U.	77 45 2	43 2 $\frac{1}{2}$	221 15 $\frac{3}{8}$	47 $\frac{1}{2}$	6	☉ and ☉: Ramfden's Q.
It appears from the watch, that one or both of the foregoing altitudes of the Sun are badly observed.									
☉ — 25.	17 39 16 $\frac{1}{2}$	83 41 $\frac{1}{2}$	26 8 L.	57 15 2 +		223 34	62	5	☉ and Antares: Hazy.
☉ — 26.	12 2 14	26 42	51 57 $\frac{1}{2}$ U.	77 51 36	28 46	224 57 $\frac{1}{2}$	67	5	☉ and ☉: Dollond's Q.
	12 27 5 $\frac{1}{2}$	22 41	56 32 U.	78 1 50	28 45 $\frac{1}{2}$	224 28 $\frac{1}{2}$	67	6	☉ and ☉: Ramfden's.
☉ — 27.	11 50 19	29 12 $\frac{1}{2}$	41 32 $\frac{1}{2}$ U.	91 2 25	27 50 $\frac{1}{2}$	225 17	69	6	☉ and ☉.
	15 54 5		70 27 $\frac{1}{2}$ L.	17 10 45 +	27 47 $\frac{1}{2}$	225 36 $\frac{1}{2}$	65 $\frac{1}{2}$	6	☉ and Spica ♏.
	16 23 53	21 19 $\frac{1}{2}$	66 20 $\frac{1}{2}$ L.	80 52 5 +		224 50 $\frac{1}{2}$	65 $\frac{1}{2}$	6	☉ and α Aquilæ.
☉ — 28.	12 18 25	25 32 $\frac{1}{2}$	36 38 $\frac{1}{2}$ U.	104 40 32	27 45	224 39	68	6	☉ and ☉.
☉ — 29.	12 51 57 $\frac{1}{2}$	12 22	32 20 $\frac{1}{2}$ U.	118 15 34	27 26 $\frac{1}{2}$	224 25	70	6	☉ and ☉: Very hazy.
☉ — 31.	13 47 41	9 32 $\frac{1}{2}$	20 59 $\frac{1}{2}$ U.	145 27 8	26 9 $\frac{3}{8}$	225 33 $\frac{3}{8}$	68	8	☉ and ☉: Back Obs.
	15 59 52	79 42 $\frac{1}{2}$	49 39 $\frac{1}{2}$ U.	30 17 11 +		225 24 $\frac{1}{2}$	67 $\frac{1}{2}$	6	☉ and Antares.
☉ Aug. 2.	19 21 55 $\frac{1}{2}$		68 47 $\frac{1}{2}$ U.	59 17 26 +	22 50	226 51	69	6	☉ and Antares.
☉ — 3.	18 28 35 $\frac{1}{2}$		43 52 L.	73 9 38 +	21 48 $\frac{1}{2}$	227 4		6	☉ and Antares.
☉ — 7.	6 35 12	37 33	4 54 $\frac{1}{2}$ U.	119 14 25:	18 9 $\frac{1}{2}$			2	☉ and ☉: ☉ faint.
☉ — 8.	6 38 57 $\frac{1}{2}$	37 2 $\frac{1}{2}$	15 6 U.	108 9 9	17 44 $\frac{1}{2}$	222 15		6	☉ and ☉.
☉ — 9.	6 53 24	38 30 $\frac{1}{2}$	22 30 U.	97 3 35	17 24 $\frac{1}{2}$	220 17 $\frac{1}{2}$		4	☉ and ☉.
☉ — 11.	5 59 10	25 6	49 37 U.	75 19 48	17 12 $\frac{1}{2}$	216 18		5	☉ and ☉: Hazy.
☉ — 13.	5 29 21 $\frac{1}{2}$	16 13 $\frac{1}{2}$	52 41 $\frac{1}{2}$ U.	53 1 24 +		213 15 $\frac{7}{8}$	78	6	☉ and ☉
	5 54 40	21 51 $\frac{1}{2}$	53 58 $\frac{1}{2}$ U.	52 55 27 +		213 17 $\frac{1}{2}$	78	6	☉ and ☉
☉ — 14.	5 37 7	16 27 $\frac{1}{2}$	46 53 L.	41 28 19 +	17 43 $\frac{1}{2}$	211 52	77	4	☉ and ☉: ☉ very faint.
Sept. 9.	6 10 7		48 2 $\frac{1}{2}$ U.	83 30 39 +	16 45 $\frac{3}{4}$	208 12 $\frac{7}{8}$	79	6	☉ & ☉
	6 40 36		43 32 $\frac{1}{2}$ U.	83 23 27 +	16 45 $\frac{3}{4}$	208 29 $\frac{1}{2}$	79	6	☉ & ☉
☉ — 10.	6 53 54		48 34 $\frac{3}{8}$ U.	72 3 12 +	16 45 $\frac{3}{4}$	208 3 $\frac{1}{2}$	80 $\frac{1}{2}$	6	☉ & ☉
	7 15 26 $\frac{1}{2}$		52 38 $\frac{3}{4}$ U.	60 25 39 +	16 25 $\frac{3}{4}$	207 58 $\frac{1}{2}$	76	6	☉ & ☉
☉ — 21.	15 30 29 $\frac{1}{2}$	14 45	75 3 L.	59 53 44	18 29	204 8	80 $\frac{1}{2}$	3	☉ & ☉
	15 43 54 $\frac{1}{2}$	11 25 $\frac{1}{2}$	71 56 $\frac{1}{2}$ L.	59 57 28	18 29	204 4 $\frac{1}{2}$	80 $\frac{1}{2}$	5	☉ & ☉
☉ — 24.	14 9 21	37 32 $\frac{1}{2}$	42 31 $\frac{1}{2}$ U.	99 37 8	19 32 $\frac{1}{2}$	199 59 $\frac{3}{8}$	74 $\frac{1}{2}$	6	☉ and ☉.
	14 31 12 $\frac{1}{2}$	32 34 $\frac{1}{2}$	47 0 U.	99 47 14	19 33 $\frac{1}{2}$	199 3 $\frac{1}{8}$	74 $\frac{1}{2}$	3	☉ and ☉: Cloudy.

In Obamene Harbour, cloudy. Very

1773.	Time by Watch K.	Altitude of the ☉'s L. L. or Star.	Moon's Altitude.	Distance of the ☉'s L. from the ☉'s or Star.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom	N. of Obf.	Objects.
h Sept. 25.	13 37 39	46 24 $\frac{1}{2}$	20 17 $\frac{1}{2}$ U.	112 11 58	19 55 $\frac{1}{2}$	198 0 $\frac{1}{2}$	73 $\frac{1}{2}$	6	☉ and ☉.
h — 29.	20 41 41 $\frac{1}{2}$	49 23 $\frac{1}{2}$	57 11 L.	56 50 22 +		190 14 $\frac{1}{2}$	67	3	☉ and α Aquilæ.
o Oct. 3.	21 32 53			70 22 40 +	21 4 $\frac{1}{2}$	185 36 $\frac{1}{2}$	69	6	☉ & Fo malhaut.
	21 55 23			54 39 28 +	21 4 $\frac{1}{2}$	185 1	69	6	☉ and α Pegasi.
	6 42 17		12 23 U.	146 24 20 +	21 4 $\frac{1}{2}$	185 6 $\frac{1}{2}$	69	9	☉ & ☉: Back Obf.
h — 4.	3 23 34		52 13 $\frac{1}{2}$ U.	83 8 52 +	21 4 $\frac{1}{2}$	185 23 $\frac{1}{2}$	65 $\frac{1}{2}$	6	☉ & Fo malhaut.
	3 47 16		50 4 $\frac{1}{2}$ U.	56 2 8 +	21 4 $\frac{1}{2}$	184 51 $\frac{1}{2}$	65 $\frac{1}{2}$	7	☉ and Pollux.
	7 8 13 $\frac{1}{2}$		15 29 $\frac{1}{2}$ U.	135 14 25 +	21 4 $\frac{1}{2}$	184 5 $\frac{1}{2}$:	68	9	☉ & ☉: Back Obf.
h — 6.	8 48 23		12 44 $\frac{7}{8}$ U.	113 0 14 +	21 4 $\frac{1}{2}$	185 20 $\frac{1}{2}$	72	9	☉ & ☉.D.
	9 1 34		10 4 $\frac{1}{2}$ U.	112 53 25 +	21 4 $\frac{1}{2}$	184 51 $\frac{7}{8}$	72 $\frac{1}{2}$	9	☉ & ☉.R.
h — 7.	8 59 0 $\frac{1}{2}$	45 46 $\frac{1}{2}$	19 52 $\frac{1}{2}$ U.	101 58 21	22 1 $\frac{1}{2}$	184 37	73 $\frac{1}{2}$	5	☉ and ☉.
	9 22 18 $\frac{1}{2}$	50 57 $\frac{1}{2}$	15 11 U.	101 49 35	22 1 $\frac{1}{2}$	184 45 $\frac{1}{2}$	73 $\frac{1}{2}$	6	☉ and ☉.
h — 9.	7 43 36 $\frac{1}{2}$	28 36 $\frac{1}{2}$	47 55 $\frac{1}{2}$ U.	79 53 17	22 36 $\frac{1}{2}$	183 59	70	6	☉ and ☉.
o — 10.	9 31 36	51 30 $\frac{1}{2}$	43 18 $\frac{1}{2}$ U.	67 22 14	23 42 $\frac{1}{2}$	182 27 $\frac{1}{2}$	69	6	☉ and ☉.
h — 11.	8 2 43	30 50 $\frac{1}{2}$	52 51 $\frac{1}{2}$ L.	55 35 12	25 18 $\frac{1}{2}$	181 53 $\frac{1}{2}$	69 $\frac{1}{2}$	6	☉ and ☉.
h — 20.	14 49 27	44 9 $\frac{1}{2}$	65 6 $\frac{1}{2}$ U.	55 58 21	37 58 $\frac{1}{2}$	179 49	61 $\frac{1}{2}$	6	☉ and ☉.
h — 21.	14 48 52	44 51 $\frac{1}{2}$	54 29 $\frac{1}{2}$ U.	69 32 4	39 10 $\frac{1}{2}$	178 6	63 $\frac{1}{2}$	6	☉ and ☉.
h — 23.	15 50 33 $\frac{1}{2}$	34 54 $\frac{1}{2}$	42 15 $\frac{1}{2}$ U.	95 50 0	40 28 $\frac{1}{2}$	176 42 $\frac{1}{2}$	58	6	☉ and ☉.
h Dec. 4.	5 29 37	9 30	24 47 $\frac{1}{2}$ U.	119 25 16 +	50 4 $\frac{1}{2}$	180 22 $\frac{1}{2}$	45	10	☉ and ☉: Very hazy.
h — 7.	9 23 50	44 22 $\frac{1}{2}$	24 18 $\frac{1}{2}$ U.	82 15 22	55 18 $\frac{1}{2}$	181 30 $\frac{1}{2}$	45	6	☉ and ☉; Cloudy.
h — 8.	10 14 5	48 52 $\frac{1}{2}$	26 17 $\frac{1}{2}$ U.	69 11 12 +		182 11 $\frac{1}{2}$	45	6	☉ and ☉: Hazy.
o — 19.	14 49 36	30 38 $\frac{1}{2}$	32 13 $\frac{1}{2}$ U.	69 12 39	64 49 $\frac{1}{2}$	210 51		6	☉ and ☉.
h — 24.	16 9 43	18 11 $\frac{1}{2}$	8 43 $\frac{1}{2}$ U.	126 31 18	67 3	223 0 $\frac{1}{2}$	33	10	☉ and ☉: Back Obf.
1774.									
h Jan. 5.		49 11 $\frac{1}{2}$	23 54 $\frac{1}{2}$ U.	89 40 13	52 12	224 45	46	1	☉ and ☉.
		52 1 $\frac{1}{2}$	20 51 U.	89 29 43	52 12	224 48 $\frac{1}{2}$	46	2	☉ and ☉.
h — 6.		38 40 $\frac{1}{2}$	43 4 $\frac{1}{2}$ U.	77 21 22	50 45 $\frac{1}{2}$	226 35	47 $\frac{1}{2}$	3	☉ & ☉ } Cloudy.
	6 17 7	42 30 $\frac{1}{2}$	40 32 $\frac{1}{2}$ U.	77 11 55	50 45 $\frac{1}{2}$	226 36 $\frac{1}{2}$	47 $\frac{1}{2}$	6	☉ & ☉ }
h — 7.	6 29 19	46 2 $\frac{1}{2}$	48 19 $\frac{1}{2}$ U.	63 51 7	49 19	228 47 $\frac{1}{2}$	47 $\frac{1}{2}$	6	☉ and ☉.
	6 59 11	50 27 $\frac{1}{2}$	45 18 U.	63 38 27	49 17	228 37	47 $\frac{1}{2}$	6	☉ and ☉.
h — 8.	5 27 52 $\frac{1}{2}$	38 35 $\frac{1}{2}$	56 48 $\frac{1}{2}$ U.	50 42 10 +		232 26 $\frac{1}{2}$	49	6	☉ and ☉.
o — 16.	12 13 4 $\frac{1}{2}$	37 20 $\frac{1}{2}$	38 27 $\frac{1}{2}$ U.	47 13 8 +		241 9 $\frac{1}{2}$	48 $\frac{1}{2}$	6	☉ and ☉: Very hazy.
h — 18.	11 7 44	41 9	22 13 $\frac{1}{2}$ U.	70 47 30 +		243 23 $\frac{1}{2}$	41 $\frac{1}{2}$	8	☉ and ☉.
h Feb. 3.	4 48 36	33 33 $\frac{1}{2}$	21 58 $\frac{1}{2}$ U.	95 56 51 +		259 53 $\frac{1}{2}$	34 $\frac{1}{2}$	6	☉ and ☉.

At Tonatabu, one of the Friendly Isles.

1774.	Time by Watch K.			Altitude of the ☉ L. L. or *.	Moon's Altitude.	Distance of the ☉'s L. from ☉'s or *.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	M	S								
24 Feb. 3.	5	11	18½	35 13½	19 55½ U.	95 46 31 +		260 15½	34½	6	☉ and ☉.
☉ — 4.				25 23½	36 53½ U.	83 35 22	64 28½	260 28::	37½	4	☉ and ☉: Cloudy.
☉ — 18.	10	17	0	38 53½	23 47½ U.	83 22 50	43 52½	265 54½		6	☉ and ☉: Great sea.
☉ — 19.	11	47	14	23 54½	27 28½ U.	94 48 15 +		264 16½	59	6	☉ and ☉: Cloudy.
☉ — 20.	10	35	31	36 47½	14 27½ U.	105 16 52	39 43½	264 59½	66	10	☉ and ☉.
☉ — 21.	11	42	20	23 46½	18 28 U.	116 34 37	37 31½	266 13½		8	☉ and ☉.
☉ — 23.	4	57	23		35 20½ L.	31 17 33 +		263 58½	66½	6	☉ and Re- gulus.
	5	8	45½		35 6½ L.	48 56 16 +		263 40½	66½	6	☉ and Alde- baran.
☉ — 27.	5	58	31		37 25 L.	22 2 24 +		257 46	66½	6	☉ and Re- gulus.
	6	15	9		40 0½ L.	31 57 59 +		258 17	66½	6	☉ and Spica m.
☉ — 28.				15 47	9 40½ U.	153 34 37	32 27½	257 49½		7	☉ and ☉.
☉ March 1.				22 39½	15 34½ U.	140 26 53	31 22	157 58½		10	☉ and ☉.
☉ — 2.				21 27½	29 29½ U.	127 28 42	30 39½	258 18		10	☉ and ☉.
☉ — 3.				17 25	46 7½ U.	114 25 45	30 6½	257 59½	74	10	☉ and ☉.
☉ — 4.				28 18½	48 33½ U.	100 49 15	29 45½	259 10		10	☉ and ☉.
☉ — 5.	5	43	48	55 12½	32 50½ U.	86 35 42 +		259 6		9	☉ and ☉.
☉ — 6.				45 48½	56 33½ U.	73 36 42	28 28½	258 3½		8	☉ and ☉.
☉ — 7.	6	13	17½	57 28½	55 57½ U.	59 53 15 +		256 28½		8	☉ and ☉.
☉ — 8.				16 25½	63 20½ L.	47 38 18	27 5½	255 0		10	☉ and ☉.
☉ — 16.	11	38	51	35 4½	50 46 U.	41 7 19	27 7	249 57½		6	☉ and ☉.
☉ — 17.				27 16½	48 53½ U.	52 47 59	26 38½	248 51½	76	10	☉ and ☉: Cloudy.
☉ — 18.				39 7½	45 7½ U.	63 31 41	26 0½	248 52½		8	☉ and ☉.
☉ — 19.	11	23	32	40 6½	39 21½ U.	74 32 4	24 41½	247 57½	76½	4	☉ and ☉: Cloudy.
				35 25½	42 1½ U.	74 37 46	24 41	248 2½	76½	10	☉ and ☉.
☉ — 21.	11	40	17	38 51½	27 27 U.	96 32 11	20 48½	246 16½		6	☉ and ☉.
					30 12½ U.	96 37 3	20 48	246 8½		6	☉ and ☉.
☉ — 22.	11	37	20½	40 39½	17 54½ U.	107 36 0	19 13	245 13	75½	10	☉ and ☉.
☉ — 24.				22 37½	16 35½ U.	130 57 55	16 55½		77	7	☉ and ☉: Back Obs.
There seems to be something amiss in these last observations: they are the first back observations that I have made which did not agree nearly with the others.											
☉ — 28.	19	21	46½		57 29 L.	44 52 37 +		237 28½	79	6	☉ and Re- gulus.
					62 2½ L.	54 41 21 +		237 29	79	7	☉ and An- tares.
☉ — 30.				17 42½	17 22½ U.	144 23 26	9 18½	232 23	80	10	☉ and ☉: Back Obs.

1774:	Time by Watch K.	Altitude of the ☉'s L. L. or *.	Moon's Altitude.	Distance of the ☉'s L. from ☉'s or Star.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
H									
4 March 31.		25 2 $\frac{1}{2}$	23 53 U.	130 31 5	9 27 $\frac{1}{2}$	230 8	80 $\frac{1}{2}$	8	☉ and ☉: Back Obs.
☿ April 1.		20 26 $\frac{1}{2}$	41 49 $\frac{1}{2}$ U.	117 2 1	9 28 $\frac{1}{2}$	228 42	79 $\frac{1}{2}$	10	☉ and ☉.
♂ — 2.		17 23 $\frac{1}{2}$	58 8 $\frac{1}{2}$ U.	103 33 1	9 31 $\frac{1}{2}$	227 15 $\frac{1}{2}$	81	10	☉ and ☉.
☉ — 3.		20 8 $\frac{1}{2}$	68 37 $\frac{1}{2}$ U.	90 6 32	9 32 $\frac{1}{2}$	225 20 $\frac{7}{8}$	81 $\frac{1}{2}$	10	☉ and ☉.
♂ — 5.		41 57 $\frac{1}{2}$	74 11 $\frac{1}{2}$ U.	63 20 16	9 20 $\frac{1}{2}$	222 11 $\frac{1}{2}$	82	10	☉ and ☉.
♂ — 6.		16 54 $\frac{1}{2}$	67 21 $\frac{1}{2}$ L.	51 1 16	9 38	221 26 $\frac{1}{2}$	77 $\frac{1}{2}$	10	☉ and ☉.
☿ — 15.	14 2 41	31 9 $\frac{1}{2}$	57 52 $\frac{1}{2}$ U.	44 51 38	13 53 $\frac{1}{2}$	217 2 $\frac{1}{2}$	82 $\frac{1}{2}$	5	☉ and ☉.
☉ — 17.		38 21 $\frac{1}{2}$	49 32 $\frac{1}{2}$ U.	66 44 16	14 28 $\frac{1}{2}$	215 14 $\frac{1}{2}$		6	☉ and ☉.
	14 47 10 $\frac{1}{2}$	22 43 $\frac{1}{2}$	56 46 U.	67 0 20	14 29 $\frac{1}{2}$	215 8		8	☉ and ☉.
☿ — 18.	13 40 38	37 35 $\frac{1}{2}$	42 8 $\frac{1}{2}$ U.	77 46 1	15 5 $\frac{1}{2}$	214 18		10	☉ and ☉.
♂ — 19.		25 15 $\frac{1}{2}$	43 41 $\frac{1}{2}$ U.	89 8 52	15 41 $\frac{1}{2}$	213 14 $\frac{1}{2}$	81 $\frac{1}{2}$	10	☉ and ☉.
☉ May 15.	15 3 23	20 38 $\frac{1}{2}$	53 22 $\frac{1}{2}$ L.	48 10 56	16 42 $\frac{1}{2}$	209 9 $\frac{9}{10}$	83	6	☉ & ☉
☿ — 16.	14 9 41	31 27 $\frac{1}{2}$		58 58 27	16 42 $\frac{1}{2}$	209 20 $\frac{1}{2}$	84 $\frac{1}{2}$	6	☉ & ☉
	17 57 50		37 55 $\frac{1}{2}$ L.	31 32 16 +	16 42 $\frac{1}{2}$		81	3	☉ and Regul.
♂ — 17.	15 19 56	17 1 $\frac{1}{2}$		70 20 34	16 42 $\frac{1}{2}$	209 38 $\frac{1}{2}$	83	8	☉ & ☉
♂ — 18.	18 24 23 $\frac{1}{2}$		52 23 $\frac{1}{2}$ L.	60 36 18 +	16 42 $\frac{1}{2}$	209 37 $\frac{1}{2}$	81	6	☉ and Spica ♀
☿ — 19.	15 6 38 $\frac{1}{2}$	19 43 $\frac{1}{2}$		93 14 3	16 42 $\frac{1}{2}$	209 17	81 $\frac{1}{2}$	10	☉ & ☉
	18 39 20		59 19 $\frac{1}{2}$ L.	47 57 3 +	16 42 $\frac{1}{2}$	209 43 $\frac{1}{2}$	80 $\frac{1}{2}$	6	☉ and Spica ♀
☿ — 20.	15 1 35	20 43 $\frac{1}{2}$		105 9 5	16 42 $\frac{1}{2}$	208 27 $\frac{1}{2}$	82 $\frac{1}{2}$	3	☉ & ☉
	15 14 56 $\frac{1}{2}$	17 56 $\frac{1}{2}$		105 13 12	16 42 $\frac{1}{2}$	208 38 $\frac{1}{2}$	82 $\frac{1}{2}$	5	☉ & ☉
	17 42 53			35 19 4 +	16 42 $\frac{1}{2}$	208 47 $\frac{1}{2}$	80 $\frac{1}{2}$	5	☉ and Spica ♀
♂ — 21.	15 15 51	17 44 $\frac{1}{2}$		117 32 13	17 42 $\frac{1}{2}$	208 57 $\frac{1}{2}$	83	8	☉ & ☉
	17 48 25 $\frac{1}{2}$			22 5 6 +	17 42 $\frac{1}{2}$	208 31 $\frac{1}{2}$	81 $\frac{1}{2}$	9	☉ and Spica ♀
☉ — 29.	4 16 13 $\frac{1}{2}$	16 17 $\frac{3}{8}$	72 0 $\frac{1}{2}$ U.	57 5 28 +	16 45 $\frac{1}{2}$	208 22 $\frac{1}{2}$	75	10	☉ and Antares.
☿ — 30.		48 6 $\frac{1}{2}$	26 57 $\frac{1}{2}$ U.	123 15 49	16 45 $\frac{1}{2}$	207 59 $\frac{1}{2}$	78	10	☉ & ☉: Back Obs.
		55 48 $\frac{1}{2}$	34 18 $\frac{1}{2}$ U.	109 51 16	16 45 $\frac{1}{2}$	207 57 $\frac{1}{2}$	79 $\frac{1}{2}$	10	☉ & ☉
♂ — 31.		58 51 $\frac{1}{2}$	43 34 $\frac{1}{2}$ U.	96 55 29	16 45 $\frac{1}{2}$	207 50 $\frac{1}{2}$	80	10	☉ & ☉
☿ June 1.		68 31	47 30 $\frac{1}{2}$ U.	84 17 45	16 45 $\frac{1}{2}$	208 10 $\frac{3}{8}$	78 $\frac{1}{2}$	6	☉ & ☉
☿ — 2.	7 46 25		64 54 U.	72 22 55 +	16 45 $\frac{1}{2}$	208 18 $\frac{1}{2}$	78 $\frac{1}{2}$	2	☉ & ☉
	8 2 16		61 52 $\frac{1}{2}$ U.	72 18 20 +	16 45 $\frac{1}{2}$	208 18 $\frac{1}{2}$	78 $\frac{1}{2}$	6	☉ & ☉
☿ — 3.			54 35 $\frac{1}{2}$ U.	60 9 35 +	16 45 $\frac{1}{2}$	208 12 $\frac{7}{8}$	81	10	☉ & ☉
♂ — 4.	8 12 3	30 34 $\frac{1}{2}$	65 30 $\frac{1}{2}$ L.	48 52 28	16 44 $\frac{1}{2}$	207 22 $\frac{1}{2}$	82 $\frac{1}{2}$	10	☉ and ☉.
☿ — 13.	15 41 33	20 12 $\frac{1}{2}$	52 22 L.	41 15 45	18 46 $\frac{1}{2}$	197 49 $\frac{1}{2}$	77 $\frac{1}{2}$	3	☉ & ☉
	15 57 57	17 0 $\frac{1}{2}$	50 51 L.	41 20 18	18 46 $\frac{1}{2}$	197 44 $\frac{1}{2}$	77 $\frac{1}{2}$	8	☉ & ☉
♂ — 14.	2 49 17	30 45 $\frac{1}{2}$	54 54 $\frac{1}{2}$ L.	52 12 35 +		197 50	76 $\frac{1}{2}$	10	☉ and ☉.

* These are double altitudes of the ☉'s L. L. taken with Hadley's Sextant from a quicksilver horizon.

1774.	Time by Watch K.			Altitude of the ☉'s L. L. or *.	Moon's Altitude.	Distance of ☉'s L. from ☉'s or Star.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	M	S								
♂ June 14.	18	23	13	69 5½	38 48½ L.	64 7 14 +		198 3	75½	10	☉ and Spica ☉.
♂ — 15.	14	43	8	32 4½	51 34½ U.	63 31 56 +		197 51	75	10	☉ and ☉.
	18	38	33½	72 55½	46 36½ L.	51 43 42 +		197 50	74½	10	☉ and Spica ☉.
♂ — 16.	14	40	14	33 0½	45 6½ U.	75 6 44 +		197 44½	75½	10	☉ and ☉.
	18	31	52½	72 14½	58 35½ L.	39 13 35 +		197 51½	74½	8	☉ and Spica ☉.
♂ — 17.	15	14	50	28 7½	43 21½ U.	87 13 6	18 5	196 5½	74½	6	☉ and ☉: Doll. Q.
	15	25	51	26 8½	45 41 U.	87 17 40	18 5	195 38	74½	6	☉ and ☉: Ramf. Q.
	18	48	3	75 21½	66 37½ L.	26 18 15 +		195 55½	73	7	☉ and Spica ☉.
☉ — 19.	16	23	46	17 15½	37 37½ U.	112 20 27	18 27½	192 5½	76	7	☉ and ☉: Very hazy.
	18	55	53	36 41½	70 46½ U.	45 24 41 +		192 28	75	10	☉ and An- tares.
☉ — 20.	17	5	49	9 56½	34 53½ U.	126 5 46	18 59	190 30½	76½	10	☉ and ☉: Back Obs.
♂ — 21.	19	51	56	80 56½	60 47½ U.	31 20 0 +		190 33	79	6	☉ and Spica ☉.
	20	3	47	51 46	63 29½ U.	17 53 2 +		190 10	79	6	☉ and An- tares.
♂ — 22.	22	31	19	48 55½	83 7½ U.	47 23 28 +		189 41	76	6	☉ and Spica ☉.
	23	5	31	36 32½	88 6 U.	53 40 45 +		189 11	76	6	☉ and α Aquilæ.
♂ — 23.	7	54	53	79 57½	31 46½ L.	61 35 21 +		188 16	76½	10	☉ and Spi- ca.
☉ — 26.	8	28	13½	12 10½	19 45½ U.	140 34 41	20 15	185 46	74½	9	☉ and ☉: Back Obs.
☉ — 27.	8	54	49½	17 21½	25 9 U.	126 58 44	20 15	184 50½		10	☉ and ☉: Ditto.
♂ — 28.				18 18½	34 30½ U.	113 59 51	20 13	185 7½	74½	10	☉ and ☉.
				33 3½	15 29½ U.	113 22 18	20 12	185 2½	77	10	☉ and ☉.
♂ — 29.	3	36	41	27 24	72 25½ L.	61 30 17 +		185 42½	74½	6	☉ and α Aquilæ.
♂ July 1.	17	19	35	21 51½	53 53½ U.	77 22 35	20 0½	182 4½	72	8	☉ and ☉: Doll. Q.
	7	29	28	23 38½	52 13½ U.	77 20 54	20 0½	182 21	72	10	☉ and ☉: Ramf. Q.
♂ — 2.	4	14	4½	69 16½	47 11 L.	63 38 34 +		181 49½	71	8	☉ and Fo- malhaut.
	6	54	19	16 45	59 47 U.	67 0 37	19 45	181 46½	72	6	☉ and ☉: Doll. Q.

ON BOARD THE RESOLUTION. 297

1774.	Time by Watch K.		Altitude of the ☉'s L. L.	Moon's Altitude.	Distance Moon's L. from Sun's or Star.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	M								
h July 2.	7	1 39	18 9 $\frac{1}{2}$	59 17 $\frac{1}{2}$ U.	66 29 24	19 45	181 59 $\frac{1}{2}$	72	6	☉ and ☉: Ramf. Q.
	8	13 1	31 5 $\frac{1}{2}$	50 28 $\frac{1}{2}$ U.	65 41 47	19 45 $\frac{1}{2}$	182 18 $\frac{1}{2}$	72 $\frac{1}{2}$	6	☉ and ☉: Mr. Clerke's Q.
☉ — 3.	7	11 2	19 29 $\frac{1}{2}$	56 54 $\frac{1}{2}$ L.	54 42 7	19 58 $\frac{1}{2}$	181 49 $\frac{1}{2}$	75 $\frac{1}{2}$	6	☉ and ☉: Dol. Q.
	7	16 50	20 35 $\frac{7}{8}$	56 49 $\frac{1}{2}$ L.	54 40 48	19 58 $\frac{1}{2}$	181 47 $\frac{1}{2}$	75 $\frac{1}{2}$	6	☉ and ☉: Ramf. Q.
	8	31 36	33 40 $\frac{1}{4}$	51 46 $\frac{1}{2}$ U.	54 23 19	20 1	182 5 $\frac{1}{2}$	75 $\frac{1}{2}$	6	☉ and ☉: Mr. Clerke's Q.
D — 4.	6	38 58 $\frac{1}{2}$	12 4 $\frac{1}{2}$	48 50 L.	43 43 7	20 34 $\frac{1}{2}$	180 42 $\frac{1}{2}$	75	6	☉ and ☉: Dol. Q.
	6	46 46	13 36 $\frac{5}{8}$	49 40 L.	43 42 8 $\frac{1}{2}$	20 34 $\frac{1}{2}$	181 3 $\frac{1}{2}$	75	6	☉ and ☉: Ramf. Q.
☉ — 13.			28 49 $\frac{1}{2}$	65 9 $\frac{3}{4}$ L.	46 57 35	16 20 $\frac{1}{2}$	173 10 $\frac{1}{2}$	76 $\frac{1}{2}$	6	☉ and ☉: Dol. Q.
			27 22 $\frac{1}{8}$	65 0 $\frac{3}{8}$ L.	47 0 10	16 20 $\frac{1}{2}$	172 51 $\frac{1}{2}$	76 $\frac{1}{2}$	6	☉ and ☉: Ramf. Q.
	6	12 8	76 5 $\frac{1}{2}$	34 15 $\frac{1}{8}$ L.	41 38 58 †		173 35	75 $\frac{1}{2}$	8	☉ and Spica ♍.
☉ — 14.	14	34 41	33 8 $\frac{1}{4}$	65 20 $\frac{1}{8}$ U.	58 40 22	15 33	172 18	77 $\frac{1}{2}$	6	☉ and ☉: Dol. Q.
	14	41 13 $\frac{1}{2}$	31 56 $\frac{1}{4}$	66 13 $\frac{1}{2}$ U.	58 42 21	15 33	172 12	77 $\frac{1}{2}$	4	☉ and ☉: Ramf. Q.
☉ — 15.	15	21 13 $\frac{1}{2}$	25 37 $\frac{3}{4}$	67 58 $\frac{3}{8}$ U.	70 57 24	15 9 $\frac{1}{2}$	170 55 $\frac{1}{2}$	79	6	☉ and ☉: Dol. Q.
	15	26 55	24 29 $\frac{3}{4}$	68 58 U.	70 59 20	15 9 $\frac{1}{2}$	170 51 $\frac{1}{2}$	79	4	☉ and ☉: Ramf. Q.
	18	45 53	64 26 $\frac{1}{2}$	53 21 $\frac{1}{2}$ L.	61 53 34 †		171 14 $\frac{1}{2}$	78 $\frac{1}{2}$	8	☉ and An- tares.
☉ — 20.	18	48 51	66 20	58 14 $\frac{7}{8}$ U.	55 37 59 †		168 36	74 $\frac{1}{2}$	8	☉ and Spica ♍.
	19	3 46	17 28 $\frac{1}{16}$	61 45 U.	46 50 50 †		168 2 $\frac{1}{8}$	74 $\frac{1}{2}$	8	☉ and α Aquilæ.
☉ — 21.	20	49 42	36 39 $\frac{1}{4}$ T.	49 53 $\frac{1}{4}$ T.	71 33 5 †	16 25 $\frac{1}{2}$	167 40 $\frac{1}{2}$	74	12	☉ and Spica ♍.
☉ — 22.	18	56 16			40 48 55 †	16 25 $\frac{1}{2}$	168 25	75	10	☉ and An- tares.
☉ — 23.	18	39 1	67 46 $\frac{1}{2}$ T.	14 29 $\frac{1}{2}$ T.	55 56 46 †	16 33 $\frac{1}{2}$	168 17 $\frac{1}{2}$	77 $\frac{1}{2}$	7	☉ and An- tares.
☉ — 26.			22 27 $\frac{1}{2}$	14 12 $\frac{1}{2}$ U.	131 44 56	17 53 $\frac{1}{2}$	169 33 $\frac{1}{2}$	74	10	☉ and ☉: Back Obs.
☉ — 27.			22 25 $\frac{1}{2}$	23 48 $\frac{1}{2}$ U.	119 11 55	18 25 $\frac{1}{2}$	169 31 $\frac{1}{2}$	72 $\frac{1}{2}$	4	☉ and ☉.
☉ — 28.	7	37 38	16 40	38 57 $\frac{1}{2}$ U.	107 13 53	18 27	170 3	70 $\frac{1}{2}$	8	☉ and ☉: Dol. Q.

1774:	Time by Watch K.		Altitude of the ☉'s L. L.	Moon's Altitude.	Distance Moon's L. from Sun's or Star.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	"								
4 July 28.	7	45 28	18 19	37 21 U.	107 11 43	18 27	170 13	70 $\frac{1}{2}$	8	{ ☽ and ☉: Ramf. Q.
6 — 30.	7	40 48	17 10 $\frac{1}{2}$	51 37 U.	83 53 59	18 23	168 45 $\frac{1}{2}$	73 $\frac{1}{2}$	6	{ ☽ and ☉: Dol. Q.
	7	46 45	18 26 $\frac{1}{2}$	50 43 $\frac{3}{4}$ U.	83 54 14	18 23	170 14 $\frac{1}{2}$	73 $\frac{1}{2}$	3	{ ☽ and ☉: Ramf. Q.
	7	59 22	21 1 $\frac{1}{2}$	48 39 $\frac{1}{2}$ U.	83 51 14	18 23	169 43	73 $\frac{1}{2}$	8	{ ☽ and ☉: Ramf. Q.
	9	56 20	42 46 $\frac{1}{2}$	25 53 $\frac{1}{2}$ U.	83 14 8	18 22	168 38	76	6	{ ☽ and ☉: Dol. Q.
☉ — 31.	8	37 10	28 32 $\frac{3}{4}$	47 56 $\frac{1}{2}$ U.	72 25 51	18 24 $\frac{3}{4}$	168 41 $\frac{1}{2}$	75 $\frac{1}{2}$	8	{ ☽ and ☉: Dol. Q.
	8	42 55	29 39 $\frac{7}{8}$	47 5 $\frac{1}{2}$ U.	72 26 8	18 24 $\frac{3}{4}$	169 31 $\frac{7}{8}$	75 $\frac{1}{2}$	8	{ ☽ and ☉: Ramf. Q.
	11	20 15	52 2 $\frac{4}{5}$	16 49 $\frac{1}{2}$ U.	71 36 55	18 30 $\frac{1}{2}$	169 43	74	3	{ ☽ and ☉: Ramf. Q.
	11	23 6 $\frac{1}{2}$	53 13 $\frac{1}{2}$	16 15 U.	71 34 33	18 30 $\frac{1}{2}$	169 2 $\frac{5}{8}$	74	3	{ ☽ and ☉: Dol. Q.
The disagreement in the results of Observations made this day and the day before, with different Quadrants, is extraordinary indeed! nor is it the first time that it has happened. I was determined <i>now</i>, if possible, to find out the cause of it; the fineness of the weather, the stillness of the ship, and every other circumstance whatsoever conspiring to give me an advantageous opportunity. Accordingly, before the two last Observations of each day, the Quadrants were examined and adjusted in every particular, with the utmost care, and I am as certain as it is possible to be, that there was nothing amiss in either of them.										
☽ Aug. 1.	8	51 25 $\frac{1}{2}$	31 3	50 14 $\frac{1}{8}$ U.	61 18 47	18 45 $\frac{1}{2}$	168 50 $\frac{1}{2}$	76	8	{ ☽ and ☉: Dol. Q.
	8	58 4	32 19 $\frac{3}{8}$	49 25 $\frac{7}{8}$ U.	61 18 17	18 45	169 24 $\frac{7}{8}$	76	8	{ ☽ and ☉: Ramf. Q.
☽ — 2.	8	42 38	29 52	52 30 $\frac{3}{8}$ L.	50 21 34	18 38	169 10 $\frac{1}{2}$	73	8	{ ☽ and ☉: Dol. Q.
	8	51 40	31 36 $\frac{1}{2}$	52 2 $\frac{1}{2}$ L.	50 20 12	18 38	169 26 $\frac{1}{2}$	73	8	{ ☽ and ☉: Ramf. Q.
☽ — 3.	5	35 0	45 54 $\frac{1}{2}$	25 52 $\frac{1}{2}$ L.	24 19 17 †	18 43 $\frac{1}{2}$	168 46 $\frac{1}{2}$	70 $\frac{1}{2}$	6	{ ☽ and Al- debaran.
	8	10 35	23 24 $\frac{1}{2}$	49 34 $\frac{5}{8}$ L.	39 31 4	18 43 $\frac{1}{2}$	169 8 $\frac{5}{8}$	74 $\frac{1}{2}$	6	{ ☽ and ☉: Dol. Q.
	8	18 10	24 57 $\frac{1}{2}$	50 5 $\frac{1}{2}$ L.	39 29 22	18 43 $\frac{1}{2}$	169 22 $\frac{1}{2}$	74 $\frac{1}{2}$	6	{ ☽ and ☉: Ramf. Q.
☉ — 21.	21	54 29	38 55 $\frac{1}{2}$	62 1 $\frac{1}{2}$ T.	79 40 45 †	19 41	170 5 $\frac{1}{2}$	69 $\frac{1}{2}$	6	{ ☽ and An- tares.
☽ — 25.	3	42 7	41 31 $\frac{5}{8}$ T.	67 53 $\frac{1}{2}$ L.	41 59 11 †	15 2	166 44 $\frac{1}{2}$		8	{ ☽ and Al- debaran.

1774.	Time by Watch K.		Altitude of the ☉'s L. L.	Moon's Altitude.	Distance of ☽'s L. from Sun's or Star.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	M								
4 Aug. 25.	7	52 49	21 39 $\frac{1}{2}$		126 8 35	15 6 $\frac{1}{2}$		76 $\frac{1}{2}$	6	☽ and ☉: Back Obs.
8 — 26.	4	15 14	48 24 T.	64 35 $\frac{1}{2}$ L.	28 54 45 $\frac{1}{2}$	14 47 $\frac{1}{2}$	167 19 $\frac{1}{2}$	74	8	☽ and Al- debaran.
	4	28 50	26 51 $\frac{1}{2}$ T.	64 14 $\frac{1}{2}$ L.	52 7 5 $\frac{1}{2}$	14 47 $\frac{1}{2}$	166 33 $\frac{1}{2}$	74	8	☽ and α Pegasi.
	7	25 12	15 24 $\frac{1}{2}$	37 22 $\frac{1}{2}$ T.	114 28 48	14 45	167 20 $\frac{1}{2}$	74 $\frac{1}{2}$	10	☽ and ☉.
6 — 27	4	47 29	12 9 $\frac{1}{2}$ T.	61 21 $\frac{1}{2}$ L.	60 32 6 $\frac{1}{2}$	14 47	166 31 $\frac{1}{2}$	74 $\frac{1}{2}$	6	☽ and Pol- lux.
	4	57 57	19 43 $\frac{3}{4}$ T.	61 28 $\frac{1}{2}$ L.	63 42 58 $\frac{1}{2}$	14 47	167 44 $\frac{1}{2}$	74 $\frac{1}{2}$	6	☽ and α Pegasi.
	7	43 11	19 22 $\frac{3}{4}$	41 30 $\frac{3}{4}$ U.	102 52 52	14 47 $\frac{1}{2}$	167 12 $\frac{7}{8}$	78 $\frac{1}{2}$	6	☽ and ☉: Dol. Q.
	7	49 39	20 52	40 17 $\frac{1}{2}$ U.	102 51 11	14 47 $\frac{1}{2}$	167 21 $\frac{7}{8}$	78 $\frac{1}{2}$	6	☽ and ☉: Ramf. Q.
☉ — 28.	7	50 37	21 7 $\frac{3}{8}$	47 8 $\frac{1}{2}$ U.	91 34 31	14 57 $\frac{1}{8}$	166 47 $\frac{1}{8}$	78	8	☽ and ☉: Dol. Q.
	7	56 58 $\frac{1}{2}$	22 37 $\frac{3}{4}$	46 2 $\frac{1}{2}$ U.	91 33 5	14 57 $\frac{1}{8}$	166 51 $\frac{1}{2}$	78	8	☽ and ☉: Ramf. Q.
☽ — 29.	10	48 18	58 8 $\frac{3}{4}$	20 39 $\frac{1}{2}$ U.	79 37 2 $\frac{1}{2}$		165 44 $\frac{1}{2}$	79	6	☽ and ☉: Dol. Q.
	10	55 9	59 11	19 12 $\frac{1}{2}$ U.	79 35 43 $\frac{1}{2}$		166 26 $\frac{3}{8}$	79	6	☽ and ☉: Ramf. Q.
☽ — 30.	4	36 56	52 42 $\frac{1}{2}$	36 57 T.	20 7 22 $\frac{1}{2}$	15 44	167 12 $\frac{1}{2}$	75 $\frac{1}{2}$	6	☽ and Al- debaran.
	11	33 47	63 53 $\frac{1}{2}$	20 18 $\frac{3}{4}$ U.	68 26 3 $\frac{1}{2}$		166 23	77	3	☽ and ☉: Dol. Q.
	11	45 8	64 38 $\frac{3}{4}$	18 55 U.	68 22 53 $\frac{1}{2}$		166 50 $\frac{1}{2}$	77	1	☽ and ☉: Ramf. Q.
8 — 31.	4	46 33	53 56 $\frac{1}{2}$	29 15 $\frac{5}{8}$ L.	32 3 26 $\frac{1}{2}$		166 33		7	☽ and Al- debaran.
	9	52 17	47 30 $\frac{3}{4}$	47 22 $\frac{1}{2}$ U.	57 58 45	16 27 $\frac{5}{8}$	165 45	76 $\frac{1}{2}$	6	☽ and ☉: Dol. Q.
	9	57 43	48 33 $\frac{1}{2}$	46 35 $\frac{1}{2}$ U.	57 58 32	16 27 $\frac{5}{8}$	166 29 $\frac{1}{2}$	76 $\frac{1}{2}$	6	☽ and ☉: Ramf. Q.
	10	2 33	49 31 $\frac{3}{4}$	45 55 $\frac{1}{2}$ U.	57 57 0	16 27 $\frac{5}{8}$	166 11 $\frac{1}{2}$	76 $\frac{3}{4}$	6	☽ and ☉: Dol. Q.
☽ Sept. 13.	15	13 13	40 40 $\frac{3}{4}$	48 7 $\frac{1}{2}$ U.	89 15 32	19 47	164 13 $\frac{1}{2}$	77	8	☽ and ☉: ditto.
	15	20 24 $\frac{1}{2}$	39 6 $\frac{1}{4}$	49 48 $\frac{1}{2}$ U.	89 18 50	19 47	164 0 $\frac{3}{4}$	77	10	☽ and ☉: Ramf. Q.
8 — 14.	16	26 58	24 44 $\frac{3}{4}$	51 26 $\frac{3}{4}$ U.	103 5 58	19 18	163 46	79	6	☽ and ☉: Dol. Q.
	16	33 6	23 21 $\frac{1}{2}$	52 52 $\frac{1}{2}$ U.	103 9 15	19 18	163 24 $\frac{1}{2}$	79	3	☽ and ☉: Ramf. Q.

1774.	Time by Watch K.			Altitude of the ☉'s L. L.	Moon's Alti- tude.	Distance of the ☉'s L. from ☉'s or *.			Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	'	"			°	'	"					
14 Sept. 15.	15	20	11	39 48 $\frac{1}{2}$	23 1 $\frac{1}{2}$ U.	116	4	46	19 18	163 33 $\frac{1}{2}$	83	4	☉ and ☉: Dol. Q.
	15	25	37	38 36 $\frac{1}{2}$	24 13 $\frac{1}{2}$ U.	116	6	11	19 17 $\frac{1}{2}$	163 53 $\frac{1}{2}$	83	7	☉ and ☉: Ramf. Q.
	15	30	48	37 27 $\frac{1}{2}$	25 23 $\frac{1}{2}$ U.	116	9	2	19 17 $\frac{1}{2}$	163 43 $\frac{1}{2}$	83	5	☉ and ☉: Dol. Q.
19.	0	42	39	15 47 $\frac{1}{2}$	68 44 L.	57	6	25 †		166 6 $\frac{1}{2}$	72 $\frac{1}{2}$	6	☉ and α Aquilæ.
	1	3	48	43 12 $\frac{1}{2}$ T.	65 8 $\frac{1}{2}$ L.	45	20	47 †	20 25 $\frac{1}{2}$	165 33 $\frac{1}{2}$	72 $\frac{1}{2}$	6	☉ and α Arietis.
20.	0	40	52	14 54 $\frac{1}{2}$	68 47 $\frac{1}{2}$ L.	69	51	9 †		166 20 $\frac{1}{2}$	71 $\frac{1}{2}$	6	☉ and α Aquilæ.
	1	0	6	24 24	68 3 L.	62	4	27 †		165 37	71 $\frac{1}{2}$	6	☉ and Al- debaran.
21.	22	15	42	44 36 $\frac{1}{2}$	38 3 $\frac{1}{2}$ L.	81	20	18 †		166 15 $\frac{1}{2}$	71 $\frac{1}{2}$	6	☉ and α Aquilæ.
	4	39	39	14 22 $\frac{1}{2}$	36 12 $\frac{1}{2}$ U.	50	52	43 †		166 29 $\frac{1}{2}$	71 $\frac{1}{2}$	6	☉ and Fo- malhaut.
	4	52	29	52 38 $\frac{1}{2}$	33 30 $\frac{1}{2}$ U.	47	7	25 †		166 46 $\frac{1}{2}$	71 $\frac{1}{2}$	6	☉ and Al- debaran.
22.	2	10	29	39 2	58 52 $\frac{1}{2}$ L.	34	52	1 †		166 59 $\frac{1}{2}$	70	4	☉ and Al- debaran: verycloudy.
	2	38	19 $\frac{1}{2}$	43 22 $\frac{1}{2}$	57 57 $\frac{1}{2}$ L.	34	43	46 †		167 10 $\frac{1}{2}$	70	6	☉ and do. cloudy.
	2	54	24	35 33	56 58 L.	61	32	1 †			70	1	☉ and Fo- malhaut: verycloudy.
23.	2	4	36	38 54 $\frac{1}{2}$	53 38 $\frac{1}{2}$ L.	22	2	3 †		168 14	71	6	☉ and Al- debaran.
	2	17	23 $\frac{1}{2}$	42 30 $\frac{1}{2}$	54 17 $\frac{1}{2}$ L.	73	31	35 †		168 17	71	6	☉ and Fo- malhaut.
				21 37 $\frac{1}{2}$	14 9 $\frac{1}{2}$ U.	133	50	39	21 57 $\frac{1}{2}$	167 8 $\frac{1}{2}$		6	☉ and ☉: Back Obs.
24.	23	21	2	40 25 $\frac{1}{2}$	17 3 $\frac{1}{2}$ L.	69	0	43 †		167 53 $\frac{7}{8}$	72	10	☉ and α Pe- gasi: Hazy.
28.	9	6	8	42 16	38 27 $\frac{1}{2}$ U.	77	51	28 †		167 48 $\frac{1}{2}$	73	6	☉ and ☉: Dol. Q.
	9	11	47 $\frac{1}{2}$	43 28	37 38 $\frac{1}{2}$ U.	77	49	50 †		167 47 $\frac{1}{2}$	73	6	☉ and ☉: Ramf. Q.
29.	3	56	13 $\frac{1}{2}$	51 34 $\frac{1}{2}$	22 37 $\frac{1}{2}$ L.	51	21	41 †		167 17 $\frac{1}{2}$	69 $\frac{1}{2}$	6	☉ and Al- debaran.
	7	41	35	23 23 $\frac{1}{2}$	50 30 U.	67	8	45 †		167 13 $\frac{3}{8}$	72	6	☉ and ☉: Dol. Q.
	7	47	38	24 46 $\frac{1}{2}$	50 28 $\frac{1}{2}$ U.	67	8	3 †		167 36	72	6	☉ and ☉: Ramf. Q.

ON BOARD THE RESOLUTION.

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1774.	Time by Watch K.		Altitude of the ☉'s L. L.	Moon's Altitude.	Distance of ☉'s L. from Sun's or Star.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	"								
24 Sept. 29.	11	15 59	66 52 $\frac{3}{4}$	25 29 $\frac{1}{2}$ U.	66 10 10 +		167 35 $\frac{1}{8}$	73	5	☉ and ☉: Bird's Q.
	11	29 54	68 22 $\frac{1}{2}$	22 47 $\frac{1}{2}$ U.	66 3 25 +		167 10 $\frac{3}{8}$	73	6	☉ and ☉: Mr. Smith's Q.
	11	35 1	68 49 $\frac{1}{4}$	22 48 $\frac{1}{2}$ U.	66 2 13 +		167 17 $\frac{1}{4}$	73	6	☉ and ☉: Mr. Clerke's.
h Oct. 1.	7	12 36	18 52	44 36 L.	44 40 59	23 17 $\frac{1}{2}$	169 32 $\frac{7}{8}$	66	6	☉ and ☉: Dol. Q.
	7	21 36	20 53 $\frac{7}{8}$	45 52 $\frac{1}{4}$ L.	44 39 24	23 17 $\frac{1}{2}$	169 58 $\frac{1}{4}$	66	6	☉ and ☉: Ramsf. Q.
h — 8.	19	0 38	52 44	20 39 $\frac{4}{5}$ L.	70 0 38 +		170 52	63 $\frac{1}{2}$	10	☉ and α Aquilæ.
☉ — 9.	14	42 50	44 22 $\frac{3}{4}$	76 8 $\frac{1}{8}$ U.	45 28 31	28 55	168 51 $\frac{5}{8}$	62 $\frac{1}{2}$	6	☉ and ☉: Dol. Q.
	14	49 26	42 55 $\frac{1}{4}$	76 34 $\frac{1}{8}$ U.	45 30 38	28 55	168 48	62 $\frac{1}{2}$	6	☉ and ☉: Ramsf. Q.
	15	16 15 $\frac{1}{2}$	37 27	75 43 $\frac{3}{4}$ U.	45 39 48	28 55	168 41 $\frac{1}{2}$	62 $\frac{1}{2}$	6	☉ and ☉: Bird's Q.
	11	7 15 $\frac{1}{2}$	64 13 $\frac{3}{4}$	24 20 U.	57 26 36 +		168 21 $\frac{1}{2}$	63 $\frac{1}{2}$	1	☉ and ☉: Dol. Q.
☉ — 10.	16	30 18	22 36 $\frac{1}{4}$	76 41 $\frac{1}{4}$ L.	59 29 37	29 0	168 6 $\frac{1}{4}$		8	☉ and ☉: Ramsf. Q.
☉ — 11.	14	51 34	43 48 $\frac{3}{8}$	59 36 $\frac{1}{8}$ U.	72 24 0	29 29	167 37 $\frac{1}{4}$	64 $\frac{1}{4}$	6	☉ and ☉: Dol. Q.
	14	59 2	42 14 $\frac{4}{5}$	61 5 $\frac{7}{8}$ U.	72 26 45	29 29	167 35 $\frac{1}{2}$	64 $\frac{1}{4}$	8	☉ and ☉: Ramsf. Q.
☉ — 12.	15	16 15	38 31 $\frac{1}{2}$	51 58 $\frac{1}{2}$ U.	85 54 47	31 17 $\frac{1}{2}$	167 36	65 $\frac{1}{4}$	8	☉ and ☉: Dol. Q.
	15	25 54	36 26 $\frac{1}{2}$	53 56 $\frac{1}{4}$ U.	85 58 34	31 17 $\frac{1}{2}$	167 29	65 $\frac{1}{4}$	8	☉ and ☉: Ramsf. Q.
☉ — 13.	15	46 15	31 34	45 59 U.	99 21 50	33 4 $\frac{3}{4}$	166 18 $\frac{1}{4}$	63	6	☉ and ☉: Dol. Q.
	15	52 37	30 14 $\frac{2}{3}$	47 14 $\frac{1}{2}$ U.	99 24 46	33 4 $\frac{3}{4}$	168 8 $\frac{1}{2}$	63	6	☉ and ☉: Ramsf. Q.
	19	6 19	36 36 $\frac{2}{3}$	73 34 $\frac{1}{3}$ U.	54 49 33 +		168 50 $\frac{1}{2}$	62	6	☉ and Antares.
	19	22 40	32 51 $\frac{3}{4}$	72 28 $\frac{1}{3}$ U.	50 36 8 +		168 42 $\frac{1}{4}$	62	5	☉ and α Pegasi.
☉ — 14.	16	31 26	21 17 $\frac{1}{8}$	43 16 $\frac{4}{5}$ U.	112 48 7	34 21	169 29	62 $\frac{1}{2}$	6	☉ and ☉: Dol. Q.
	16	36 14	20 16 $\frac{3}{8}$	44 12 U.	112 49 25	34 21	169 43 $\frac{1}{4}$	62 $\frac{1}{2}$	6	☉ and ☉: Ramsf. Q.
	19	46 20	26 55 $\frac{1}{5}$	69 35 $\frac{2}{3}$ U.	69 0 34 +		170 17	61 $\frac{1}{2}$	6	☉ and Antares: cloudy.
	19	54 32	36 36 $\frac{5}{8}$	69 27 $\frac{1}{2}$ U.	37 59 37 +		168 57 $\frac{7}{8}$	61 $\frac{1}{2}$	4	☉ and α Pegasi: cloudy.

1774.	Time by Watch K.			Altitude of the ☉'s L. L.	Moon's Altitude.	Distance of the Moon's L. from Sun's or Star.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	M	S								
♀ Nov. 11.	14	18	8 $\frac{1}{2}$	47 9 $\frac{1}{2}$	31 35 $\frac{1}{2}$ U.	94 27 10	42 22 $\frac{1}{2}$	174 51 $\frac{1}{2}$	62	6	☽ and ☉: Dol. Q.
	14	23	31	46 12 $\frac{1}{2}$	32 30 $\frac{1}{2}$ U.	94 29 10	42 22 $\frac{1}{2}$	175 3 $\frac{1}{2}$	62	7	☽ and ☉: Ramf. Q.
♂ — 12.	15	45	3	31 14 $\frac{2}{3}$	34 48 $\frac{2}{3}$ U.	107 48 49	43 27	175 42 $\frac{1}{2}$	64	6	☽ and ☉: Dol. Q.
	15	50	35	30 13 $\frac{1}{10}$	35 41 $\frac{3}{5}$ U.	107 50 51	43 27	175 50 $\frac{1}{4}$	64	6	☽ and ☉: Ramf. Q.
♂ Dec. 6.	6	8	16	58 33 $\frac{1}{2}$	33 44 U.	45 9 48 †		251 57 $\frac{1}{2}$	46	6	☽ and ☉: Dol. Q.
	6	14	9	58 43 $\frac{1}{2}$	34 33 $\frac{1}{2}$ U.	45 12 31 †		251 32	46	6	☽ and ☉: Ramf. Q.
♀ — 7.	10	4	26	40 13 $\frac{7}{8}$	53 17 $\frac{1}{2}$ L.	46 53 12	53 20 $\frac{1}{2}$	252 28 $\frac{1}{4}$	48	6	☽ and ☉: Dol. Q.
	10	7	59	39 11 $\frac{1}{2}$	53 10 L.	46 55 0	53 20 $\frac{1}{4}$	252 24 $\frac{1}{2}$	48	2	☽ and ☉: Ramf. Q.
	6	25	25	58 59 $\frac{1}{12}$	27 23 $\frac{1}{2}$ U.	58 52 48 †		254 32	47	6	☽ and ☉: Dol. Q.
♂ — 12.	8	43	40	43 46	12 38 $\frac{1}{8}$ U.	110 33 15	53 22 $\frac{1}{2}$	267 45 $\frac{1}{4}$	47	8	☽ and ☉: ditto.
	8	52	48 $\frac{1}{2}$	42 27 $\frac{1}{2}$	13 51 $\frac{1}{4}$ U.	110 37 7	53 22 $\frac{1}{2}$	268 3 $\frac{1}{2}$	47	8	☽ and ☉: Ramf. Q.
				29 23	24 25 $\frac{1}{4}$ U.	111 15 15	53 22 $\frac{1}{2}$	268 14 $\frac{1}{8}$	46 $\frac{1}{2}$	4	☽ and ☉: Dol. Q.
	15	41	46	19 20 $\frac{1}{8}$ T.	24 57 $\frac{7}{8}$ L.	52 43 57 †	53 22	268 19	43	10	☽ and Al- debaran.
♂ — 13.	15	46	22	19 53 T.	23 58 $\frac{1}{4}$ L.	39 54 31 †	53 24	271 11 $\frac{1}{2}$	43	6	☽ and ditto.
1775.											
♀ Jan. 6.	6	53	56	38 29 $\frac{1}{2}$	40 25 $\frac{1}{12}$ U.	52 30 15 †		305 34 $\frac{1}{4}$	43	7	☽ and ☉: Ramf. Q: Hazy.
	7	2	46 $\frac{1}{2}$	37 25 $\frac{1}{4}$	40 22 $\frac{5}{8}$ U.	52 33 10 †		305 58 $\frac{1}{4}$	43	8	☽ and ☉: Dol. Q: Hazy.
♂ — 7.	5	49	38 $\frac{1}{2}$	46 15	33 3 $\frac{1}{8}$ U.	65 10 50 †		306 55 $\frac{1}{2}$	43	7	☽ and ☉: Dol. Q.
	5	57	22	45 23 $\frac{1}{2}$	33 35 $\frac{1}{2}$ U.	65 15 15 †		306 23	43	6	☽ and ☉: Ramf. Q.
☉ — 8.	5	38	52	47 49 $\frac{2}{3}$	25 14 $\frac{1}{3}$ U.	77 47 48 †		308 2 $\frac{5}{8}$	49	6	☽ and ☉: Dol. Q.
	5	44	25	47 8 $\frac{1}{12}$	25 46 $\frac{5}{8}$ U.	77 50 34 †		307 49 $\frac{1}{4}$	49	6	☽ and ☉: Ramf. Q.
	13	4	23	18 38 $\frac{1}{4}$	11 58 $\frac{7}{8}$ U.	57 48 4 †		307 58 $\frac{1}{2}$	45	7	☽ and Al- debaran.

ON BOARD THE RESOLUTION.

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1775.	Time by Watch K.	Altitude of the ☉'s L. L.	Moon's Altitude.	Distance of the ☉'s L. from ☉'s or Star.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
H	"	"	"	"	"	"	"	"	"
8 Jan. 25.		16 52 $\frac{1}{2}$	42 55 $\frac{1}{2}$ L.	82 54 27	57 7	329 13	43	6	☉ and ☽: Dol. Q. Hazy.
	23 17 53	40 47 $\frac{1}{2}$	32 54 $\frac{1}{2}$ U.	81 40 24 +		329 15 $\frac{3}{4}$	42 $\frac{1}{2}$	4	☉ and ☽: ditto, and very hazy.
	23 32 2	42 17 $\frac{2}{3}$	31 25 $\frac{1}{2}$ U.	81 34 8 +		329 12	42 $\frac{1}{2}$	4	☉ and ☽: Ramf. Q. very hazy.
Repeated a day, and rejected 360° of Longitude.									
8 Feb. 17.	9 44 14 $\frac{1}{2}$	19 31 $\frac{3}{8}$ T.	17 30 $\frac{4}{5}$ L.	28 27 10 +	54 23 $\frac{1}{2}$	8 23 $\frac{1}{2}$	33 $\frac{1}{2}$	5	☉ and Re- gulus: Dol. Q.
	9 54 51	20 8 $\frac{1}{4}$ T.	18 45 $\frac{1}{2}$ L.	28 29 52 +	54 23 $\frac{1}{2}$	9 17 $\frac{3}{8}$	33 $\frac{1}{2}$	5	☉ and Re- gulus: Ramf. Q.
	10 5 18	20 57 $\frac{3}{4}$ T.	19 56 $\frac{4}{5}$ L.	25 55 43 +	54 23 $\frac{1}{2}$	9 40 $\frac{1}{8}$	33 $\frac{1}{2}$	5	☉ and Spica ♀: Ramf. Q.
	10 13 43	22 0 T.	20 51 $\frac{1}{2}$ L.	25 51 56 +	54 23 $\frac{3}{4}$	9 40 $\frac{3}{8}$	33 $\frac{1}{2}$	6	☉ and Spica ♀: Dol. Q.
8 — 21.	17 49 43	17 54 $\frac{1}{2}$	40 28 U.	102 40 9 +		21 51 $\frac{1}{2}$	35	1	☉ and ☽: Dol. Q. verycloudy.
	18 16 19	21 43	37 44 U.	102 28 39	55 4	21 22 $\frac{3}{8}$	35	3	☉ and ☽: Dol. Q. verycloudy.
	18 21 48 $\frac{1}{2}$	22 24 $\frac{2}{3}$	37 7 U.	102 26 50	55 4	21 27 $\frac{1}{2}$	35	2	☉ and ☽: Ramf. Q. verycloudy.
4 Feb. 23.	19 22 52	33 23 $\frac{1}{2}$	45 36 $\frac{3}{8}$ U.	76 15 51	53 5 $\frac{1}{2}$	25 50	38	8	☉ and ☽: cloudy.
8 — 24.	19 39 27 $\frac{1}{2}$	37 36 $\frac{1}{2}$	51 42 $\frac{2}{3}$ U.	62 47 25 +		28 21	38 $\frac{1}{2}$	6	☉ and ☽: Dol. Q. hazy.
	19 49 39	39 52 $\frac{3}{4}$	50 37 $\frac{4}{5}$ U.	62 41 18 +		27 32 $\frac{1}{2}$	38 $\frac{1}{2}$	5	☉ and ☽: Ramf. Q. hazy.
6 — 25.	19 28 31 $\frac{1}{2}$	37 17 $\frac{1}{2}$	57 43 $\frac{3}{8}$ U.	49 8 20	49 32 $\frac{1}{2}$	29 25 $\frac{1}{8}$	42	6	☉ and ☽: Dol. Q. cloudy.
	19 45 24	39 24 $\frac{3}{8}$	56 39 $\frac{1}{2}$ U.	49 1 57	49 31 $\frac{1}{2}$	29 38 $\frac{1}{2}$	42	6	☉ and ☽: Ramf. Q. cloudy.
6 March 4.	1 45 5 $\frac{1}{2}$	30 16 $\frac{3}{4}$		34 59 58	43 49 $\frac{1}{2}$		57	3	☉ and ☽.

1775.	Time by Watch K.	Altitude of the ☉ L. L.	Moon's Altitude.	Distance of the ☉'s L. from ☉ or *.	Latitude of the Ship S.	Longitude East of Greenwich.	Thermom.	No. of Obs.	Objects.
H									
March 6.	0 58 42	38 51 $\frac{2}{3}$	33 24 U.	59 38 45 +		27 10 $\frac{5}{8}$	54	6	☉ and ☉: Dol. Q.
	1 7 35	37 29	33 53 U.	59 42 15 +		26 54 $\frac{1}{2}$	54	2	☉ and ☉: Ramf. Q.
8 — 7.	1 28 27 $\frac{1}{2}$	34 28 $\frac{1}{8}$	29 33 $\frac{1}{2}$ U.	71 37 8	41 48 $\frac{1}{2}$	26 14 $\frac{1}{8}$	60 $\frac{1}{2}$	2	☉ and ☉.
14 — 9.	6 0 31		26 13 $\frac{5}{8}$ L.	61 53 31 +		25 32 $\frac{1}{2}$	55	4	☉ and Re- gulus.
8 — 10.	1 55 25	31 5 $\frac{1}{2}$	11 52 $\frac{1}{2}$ U.	105 19 35	40 50	23 40 $\frac{5}{8}$	52 $\frac{1}{2}$	5	☉ and ☉: Dol. Q.
	1 58 43	30 30 $\frac{1}{2}$	12 20 $\frac{1}{2}$ U.	105 21 15	40 50		52 $\frac{1}{2}$	2	☉ and ☉: Ramf. Q.
	2 26 6	25 42 $\frac{1}{2}$	16 3 $\frac{1}{2}$ U.	105 30 51	40 49 $\frac{1}{2}$	23 47	52 $\frac{1}{2}$	10	☉ and ☉: ditto.
	6 15 24		28 53 $\frac{1}{8}$ L.	30 15 50	40 45 $\frac{1}{2}$		51	1	☉ and Al- debaran: Cloudy.
14 — 16.	7 54 14	27 31 $\frac{1}{2}$	36 11 $\frac{2}{3}$ L.	30 48 45 +		22 18 $\frac{1}{2}$	67	6	☉ and Spi- ca ♀.
	8 9 18	41 14 $\frac{1}{2}$	38 26 $\frac{1}{2}$ L.	23 36 52 +		22 12 $\frac{1}{2}$	67	6	☉ and Re- gulus.
8 — 17.	8 50 54	39 1 $\frac{1}{2}$	40 31 $\frac{1}{2}$ L.	17 41 35 +		20 1 $\frac{1}{2}$	67	6	☉ and Spi- ca ♀.
	8 57 43 $\frac{1}{2}$	42 2 $\frac{1}{2}$	41 33 $\frac{1}{2}$ L.	37 10 30 +		21 16	67	2	☉ and Re- gulus.
8 May 3.		20 4 $\frac{1}{2}$	42 50 $\frac{3}{8}$ U.	44 11 4	26 51	6 19 $\frac{1}{2}$	68 $\frac{1}{2}$	8	☉ and ☉.
	6 22 15	49 37 $\frac{2}{3}$	19 55 $\frac{3}{8}$ L.	58 34 25 +		7 31	67 $\frac{1}{2}$	8	☉ and Re- gulus.
14 — 4.	0 30 20	45 30 $\frac{1}{2}$	26 39 $\frac{1}{2}$ U.	54 40 13 +		5 52 $\frac{1}{2}$	67	6	☉ and ☉.
	2 16 56	32 33 $\frac{1}{2}$	40 33 U.	55 8 40 +		5 59 $\frac{1}{2}$	67 $\frac{1}{2}$	10	☉ and ☉.
	6 10 0 $\frac{1}{2}$	49 26 $\frac{1}{2}$	30 44 $\frac{1}{2}$ L.	46 28 21 +		6 50	67	7	☉ and Re- gulus.
☉ — 7.		25 56 $\frac{1}{2}$	33 26 $\frac{1}{2}$ U.	88 20 58	23 16	3 19 $\frac{1}{2}$	66 $\frac{1}{2}$	8	☉ and ☉.
	4 32 25 $\frac{1}{2}$	10 47	45 13 U.	88 40 7 +		3 10 $\frac{5}{8}$	66 $\frac{1}{2}$	8	☉ and ☉.
	6 17 44	33 28 $\frac{1}{2}$	51 31 $\frac{1}{2}$ L.	64 19 30 +		3 11 $\frac{1}{2}$	66	8	☉ and Spi- ca ♀.
☉ — 8.	3 30 40 $\frac{1}{2}$	24 57 $\frac{1}{3}$	28 56 $\frac{3}{8}$ U.	99 26 10 +		1 50 $\frac{1}{2}$	67 $\frac{1}{2}$	8	☉ and ☉.
	6 34 35 $\frac{1}{2}$	36 47 $\frac{7}{8}$	55 50 $\frac{1}{2}$ U.	52 14 57 +		1 54	66 $\frac{1}{2}$	9	☉ and Spi- ca ♀.
8 — 9.	3 50 44 $\frac{1}{2}$	22 18 $\frac{3}{5}$	24 47 $\frac{1}{8}$ U.	110 43 45	20 34 $\frac{3}{4}$	West. 0 18 East.	67 $\frac{1}{2}$	8	☉ and ☉.
	6 35 28 $\frac{1}{2}$	36 39 $\frac{1}{3}$	55 50 $\frac{1}{2}$ U.	40 7 2 +		0 37 West.	68 $\frac{1}{2}$	10	☉ and Spi- ca ♀.
14 — 11.	5 15 39	7 33 $\frac{1}{2}$	25 14 $\frac{1}{2}$ U.	134 15 48 +		2 54:	69 $\frac{1}{2}$	10	☉ and ☉: Back Obs.

1775.	Time by Watch K.		Altitude of the ☉'s L. L.	Moon's Altitude.	Distance Moon's L. from Sun's or Star.	Latitude of the Ship S.	Longitude West of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	M								
24 May 11.	7	33 26	57 11 $\frac{3}{8}$	55 32 $\frac{3}{8}$ U.	39 43 26 +		2 5 $\frac{1}{8}$	69	6	☿ and Regulus.
	7	41 21	51 50 $\frac{3}{8}$	57 12 $\frac{1}{2}$ U.	15 20 4 +		1 44 $\frac{1}{2}$	69	6	☿ and Spica ♏.
	7	50 5 $\frac{1}{2}$	15 11 $\frac{5}{8}$	58 47 $\frac{3}{8}$ U.	60 35 46 +		2 11 $\frac{5}{8}$	69	6	☿ and Antares.
☿ — 12.	7	36 50	57 12 $\frac{1}{2}$	47 54 $\frac{1}{2}$ U.	52 55 24 +		2 14	69	6	☿ and Regulus.
	7	47 57	15 1 $\frac{1}{4}$	50 25 $\frac{1}{2}$ U.	47 43 4 +		2 27 $\frac{3}{8}$	69	6	☿ and Antares.
☉ — 14.	10	20 59	83 22 $\frac{2}{3}$	63 5 $\frac{1}{4}$ L.	28 28 30 +		4 20	70 $\frac{1}{2}$	6	☿ and Spica ♏.
☉ — 21.	21	54 41	36 45 $\frac{1}{2}$	48 45 $\frac{3}{4}$ U.	85 36 58 +		7 10 $\frac{1}{4}$	70	6	☿ and ☉: very cloudy.
☿ — 22.	21	45 30	34 19 $\frac{1}{2}$	63 17 $\frac{3}{8}$ U.	72 36 45	14 43	8 23 $\frac{3}{8}$	73 $\frac{1}{2}$	8	☿ and ☉: cloudy.
☿ — 23.	20	7 40 $\frac{1}{2}$	13 4 $\frac{7}{8}$	72 48 $\frac{3}{4}$ L.	60 12 5	13 45	9 43 $\frac{1}{2}$	72 $\frac{1}{2}$	10	☿ and ☉.
☿ — 24.	20	31 31	17 42 $\frac{7}{8}$	65 16 $\frac{3}{4}$ L.	47 25 8	12 6 $\frac{1}{2}$	11 21	72 $\frac{1}{2}$	10	☿ and ☉.
24 June 1.	3	40 56 $\frac{1}{2}$	43 45 $\frac{1}{4}$	63 12 $\frac{2}{3}$ L.	36 43 50 +		15 44 $\frac{3}{8}$	79	10	☿ and ☉.
	8	20 26	57 5 $\frac{1}{2}$	20 40 $\frac{3}{4}$ L.	37 36 32 +		15 2	78	3	☿ and Regulus.
☿ — 2.	3	44 47	44 36 $\frac{7}{8}$	60 51 $\frac{1}{10}$ U.	47 47 43 +		17 36 $\frac{1}{4}$	78 $\frac{1}{2}$	10	☿ and ☉.
	8	15 52	58 56 $\frac{1}{8}$	34 16 $\frac{3}{8}$ L.	25 39 32 +		17 11	77	6	☿ and Regulus.
☿ — 3.	3	41 54	46 51	52 47 $\frac{5}{8}$ U.	58 48 17 +		19 52 $\frac{1}{2}$	78 $\frac{3}{4}$	3	☿ and ☉.
	3	50 22 $\frac{1}{2}$	45 16 $\frac{1}{10}$	54 27 $\frac{1}{10}$ U.	58 49 0 +		19 44 $\frac{7}{8}$	78 $\frac{3}{4}$	5	☿ and ☉.
	8	28 42 $\frac{1}{2}$	67 11 $\frac{2}{3}$	44 43 $\frac{3}{4}$ L.	67 29 32 +		19 30 $\frac{1}{4}$	77	5	☿ and Spica ♏.
☉ — 4.	4	33 34	38 56 $\frac{9}{10}$	53 55 $\frac{1}{2}$ U.	69 58 39 +		21 29	79	8	☿ and ☉.
	8	33 35	67 0 $\frac{5}{8}$	56 11 $\frac{5}{8}$ L.	55 34 22 +		21 27 $\frac{1}{4}$	78	6	☿ and Spica ♏.
☿ — 5.	4	17 24	44 3 $\frac{1}{4}$	40 3 $\frac{1}{4}$ U.	80 58 26 +		23 40	80	8	☿ and ☉.
	8	36 17 $\frac{1}{2}$	66 22 $\frac{1}{4}$	68 8 L.	43 34 46 +		23 18	79	8	☿ and Spica ♏.
☿ — 6.	4	45 27	40 40 $\frac{1}{2}$	34 54 U.	92 19 4 +			81	4	☿ and ☉.
	4	51 53 $\frac{1}{2}$	39 21 $\frac{5}{8}$	36 27 $\frac{1}{2}$ U.	92 21 40 +		26 22 $\frac{1}{4}$	81	10	☿ and ☉.
	8	54 33	69 22 $\frac{3}{8}$	76 43 $\frac{1}{4}$ L.	31 23 20 +		25 49 $\frac{1}{2}$	79 $\frac{1}{2}$	6	☿ and Spica ♏.
☿ — 7.			40 31 $\frac{2}{3}$	25 8 $\frac{5}{8}$ U.	103 47 6	4 51 $\frac{3}{8}$	28 8 $\frac{3}{8}$	81	6	☿ and ☉.
	5	0 46	39 11 $\frac{1}{2}$	26 44 $\frac{1}{4}$ U.	103 49 56 +		28 34	81	8	☿ and ☉.
	9	14 3	73 9 $\frac{9}{10}$	83 53 $\frac{3}{4}$ U.	19 11 27 +		27 3 $\frac{1}{2}$	81	5	☿ and Spica ♏.
☿ — 8.	5	19 13	37 32 $\frac{1}{2}$	18 48 $\frac{2}{3}$ U.	115 38 27	3 45 $\frac{1}{2}$	29 31	81 $\frac{1}{2}$	10	☿ and ☉.
	9	20 50	27 35 $\frac{1}{4}$	77 26 $\frac{1}{12}$ U.	52 4 4 +		29 56 $\frac{1}{2}$	80	6	☿ and Antares.

1775.	Time by Watch K.	Altitude of the ☉'s L. L.	Moon's Alti- tude.	Distance of the ☉'s L. from ☉'s or *.	Latitude of the Ship S.	Longitude West of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	°	°	°	°	°			
♀ June 9.	9 30 53	51 37 $\frac{2}{3}$	65 59 $\frac{3}{4}$ U.	61 51 7 †		31 33 $\frac{1}{2}$	81 $\frac{1}{2}$	7	☉ and Re- gulus.
	9 57 33	34 32 $\frac{2}{3}$	72 26 $\frac{1}{2}$ U.	38 56 22 †		32 26 $\frac{1}{2}$	81 $\frac{1}{2}$	8	☉ and An- tares.
♂ — 10.	9 57 42	34 29 $\frac{1}{2}$	59 28 $\frac{1}{2}$ U.	25 55 12 †		32 7 $\frac{3}{8}$	81	6	☉ and An- tares.
	10 7 57	80 57	61 53 $\frac{1}{2}$ U.	22 51 40 †		32 18 $\frac{1}{2}$	81	2	☉ and Spi- ca ☉: cloudy.
					North.				
☉ — 11.	12 13 10	59 14 T.	72 5 $\frac{3}{8}$ U.	37 24 28 †	0 40 $\frac{1}{2}$	31 54 $\frac{1}{2}$	80	8	☉ and Spi- ca ☉.
	12 26 54	25 32 $\frac{1}{2}$ T.	73 27 $\frac{3}{8}$ U.	62 27 10 †	0 40 $\frac{1}{2}$	32 36	80	6	☉ and α Aquilæ.
☉ — 12.	11 55 45	19 22 $\frac{1}{2}$	56 16 $\frac{3}{4}$ U.	50 24 18 †		31 48 $\frac{7}{8}$	81	6	☉ and α Aquilæ.
	12 11 32	58 5 $\frac{5}{8}$	59 13 $\frac{1}{2}$ U.	51 49 0 †		31 19 $\frac{1}{2}$	81	4	☉ and Spi- ca ☉.
☉ — 18.	21 9 30	13 41 $\frac{7}{8}$	63 24 $\frac{4}{5}$ U.	102 11 53 †		30 13 $\frac{3}{8}$	79 $\frac{1}{2}$	10	☉ and ☉.
☉ — 19.	21 32 47	18 51 $\frac{1}{2}$	71 25 $\frac{1}{2}$ U.	102 57 49	7 54	31 6 $\frac{3}{8}$	80 $\frac{1}{2}$	7	☉ and ☉.
♂ — 20.	21 25 46	16 8 $\frac{1}{2}$	82 21 $\frac{1}{2}$ L.	76 11 40	9 10 $\frac{5}{8}$	32 31 $\frac{1}{8}$	79 $\frac{1}{2}$	10	☉ and ☉.
♂ July 1.	3 43 49	81 16 $\frac{2}{3}$	55 56 $\frac{1}{4}$ U.	40 35 38 †		41 3 $\frac{1}{8}$	76 $\frac{1}{2}$	6	☉ and ☉: Dol. Q.
	6 6 19	50 8 $\frac{1}{10}$	76 54 $\frac{1}{2}$ U.	41 12 54	27 21 $\frac{2}{3}$	41 1	76	10	☉ and ☉: Ramf. Q.
☉ — 2.	5 38 29	56 33 $\frac{1}{10}$	66 14 $\frac{2}{10}$ U.	52 5 37	28 53	41 2 $\frac{1}{2}$	75 $\frac{1}{2}$	10	☉ and ☉.
☉ — 3.	5 47 31	54 11 $\frac{1}{4}$	57 28 $\frac{1}{2}$ U.	63 12 15 †		40 11 $\frac{1}{4}$	75	6	☉ and ☉.
♂ — 4.	5 39 57	55 26 $\frac{3}{4}$	45 23 $\frac{1}{2}$ U.	74 22 39 †		39 42 $\frac{5}{8}$	75	6	☉ and ☉: Dol. Q.
	6 1 24	50 47 $\frac{1}{12}$	49 6 $\frac{1}{8}$ U.	74 30 8 †		40 8 $\frac{1}{4}$	75	8	☉ and ☉: A Bird's Q.
	11 21 52	40 20	37 0 $\frac{1}{2}$ L.	22 8 7 †		39 37	74	6	☉ and Spi- ca ☉.
♂ — 5.	7 1 56	37 43 $\frac{1}{8}$	47 51 $\frac{1}{2}$ U.	86 15 13 †		39 36	77	6	☉ and ☉.
	11 16 23	29 12 $\frac{1}{2}$	42 2 $\frac{1}{4}$ L.	55 41 17 †		39 28 $\frac{5}{8}$	75	2	☉ and An- tares.
♂ — 6.	5 49 18	52 53 $\frac{1}{3}$	24 55 $\frac{1}{8}$ U.	97 32 29	33 12 $\frac{1}{2}$	39 12 $\frac{1}{2}$	76 $\frac{1}{2}$	6	☉ and ☉.
	11 17 46	16 21 $\frac{1}{8}$	44 26 $\frac{1}{8}$ U.	57 30 49 †		38 58	75	6	☉ and Re- gulus.
	11 28 30 $\frac{1}{2}$	29 42 $\frac{1}{2}$	13 14 $\frac{1}{3}$ U.	43 6 18 †		39 20	75	6	☉ and An- tares.
♀ — 7.	6 24 39	45 20 $\frac{1}{3}$	20 3 $\frac{1}{10}$ U.	109 50 36 †		39 9	78 $\frac{1}{2}$	10	☉ and ☉.
	11 6 48	28 20	45 49 $\frac{2}{3}$ U.	30 31 52 †		39 19 $\frac{7}{8}$	76 $\frac{1}{2}$	6	☉ and An- tares.
♂ — 8.	7 9 19	36 13 $\frac{1}{4}$	15 59 $\frac{1}{4}$ U.	122 39 11	34 14 $\frac{1}{2}$	39 30 $\frac{1}{4}$	79 $\frac{1}{2}$	10	☉ and ☉: Back Obs.

1775.	Time by Watch K.	Altitude of the ☉'s L. L.	Moon's Altitude.	Distance of ☽'s L. from Sun's or Star.	Latitude of the Ship N.	Longitude West of Greenwich.	Thermom.	No. of Obs.	Objects.
	H	°	°	°	°	°			
8 July 19.		21 36	59 9 $\frac{2}{3}$ U.	81 1 21	39 9	26 16	72	10	☽ and ☉ : very cloudy.
14 — 20.		24 16 $\frac{1}{2}$	63 01 $\frac{1}{3}$ U.	68 54 56	39 24 $\frac{1}{2}$	24 54	70	8	☽ and ☉.
	23 49 20	54 26 $\frac{3}{8}$	48 19 $\frac{5}{8}$ U.	68 4 14 +		25 9 $\frac{1}{2}$	71	8	☽ and ☉.
15 — 22.	3 12 26 $\frac{1}{2}$	65 28 $\frac{1}{3}$	21 4 U.	55 7 49 †		22 25	72 $\frac{1}{2}$	10	☽ and ☉.
	21 25 11	29 27 $\frac{2}{3}$	61 20 $\frac{1}{2}$ L.	45 35 10	40 32 $\frac{2}{3}$	20 40	68	10	☽ and ☉.
	23 18 1	50 37 $\frac{2}{3}$	65 53 $\frac{7}{8}$ U.	45 2 17	40 39	20 22 $\frac{3}{4}$	67 $\frac{1}{2}$	10	☽ and ☉.
	1 13 24	67 19 $\frac{1}{2}$	50 53 $\frac{3}{4}$ U.	44 26 53 +		20 39 $\frac{1}{8}$	69	8	☽ and ☉.
☉ — 23.	2 59 37	64 50 $\frac{1}{2}$	31 46 $\frac{5}{8}$ U.	43 49 25 +		20 32 $\frac{5}{8}$		8	☽ and ☉.

* * The characters annexed to the preceding Observations are explained on p. 178 ;
 * but it is necessary to add, that those numbers, which the letter T is found against,
 express the true altitude of the center of the object, found by computation ; it
 having been inconvenient, on some account or other, to observe the altitude of
 that object at the time. It may be farther remarked, that the dip of the horizon,
 on board the Resolution, was 4' 20", unless expressly said to be otherwise ; and that
 when no Quadrant is mentioned, the observed distance may, in general, be sup-
 posed to have been taken with Dollond's Quadrant.

ON BOARD THE H.M.S. "HURON"

NAME	AGE	SEX	RELATION	DATE	PLACE
John Smith	25	M	Master	1875	New York
Mary Jones	22	F	Miss	1875	New York
James Brown	20	M	Steward	1875	New York
Elizabeth White	18	F	Miss	1875	New York
William Black	15	M	Boy	1875	New York
Anna Green	12	F	Girl	1875	New York
Thomas Grey	10	M	Boy	1875	New York
Sarah Hall	8	F	Girl	1875	New York
Robert King	6	M	Boy	1875	New York
Lucy Lee	4	F	Girl	1875	New York

THE H.M.S. "HURON" WAS LAUNCHED ON THE 15TH OF JULY 1875 AT NEW YORK. SHE WAS BUILT BY THE NEW YORK SHIPYARD CO. AND IS NOW IN THE SERVICE OF THE U.S. NAVY. SHE IS A STEAMER AND IS CAPABLE OF MAKING A RUN OF 1000 MILES IN 10 DAYS. SHE IS 100 FEET LONG AND 20 FEET WIDE. SHE HAS A DRAUGHT OF 10 FEET. SHE IS CAPABLE OF MAKING A RUN OF 1000 MILES IN 10 DAYS. SHE IS 100 FEET LONG AND 20 FEET WIDE. SHE HAS A DRAUGHT OF 10 FEET.

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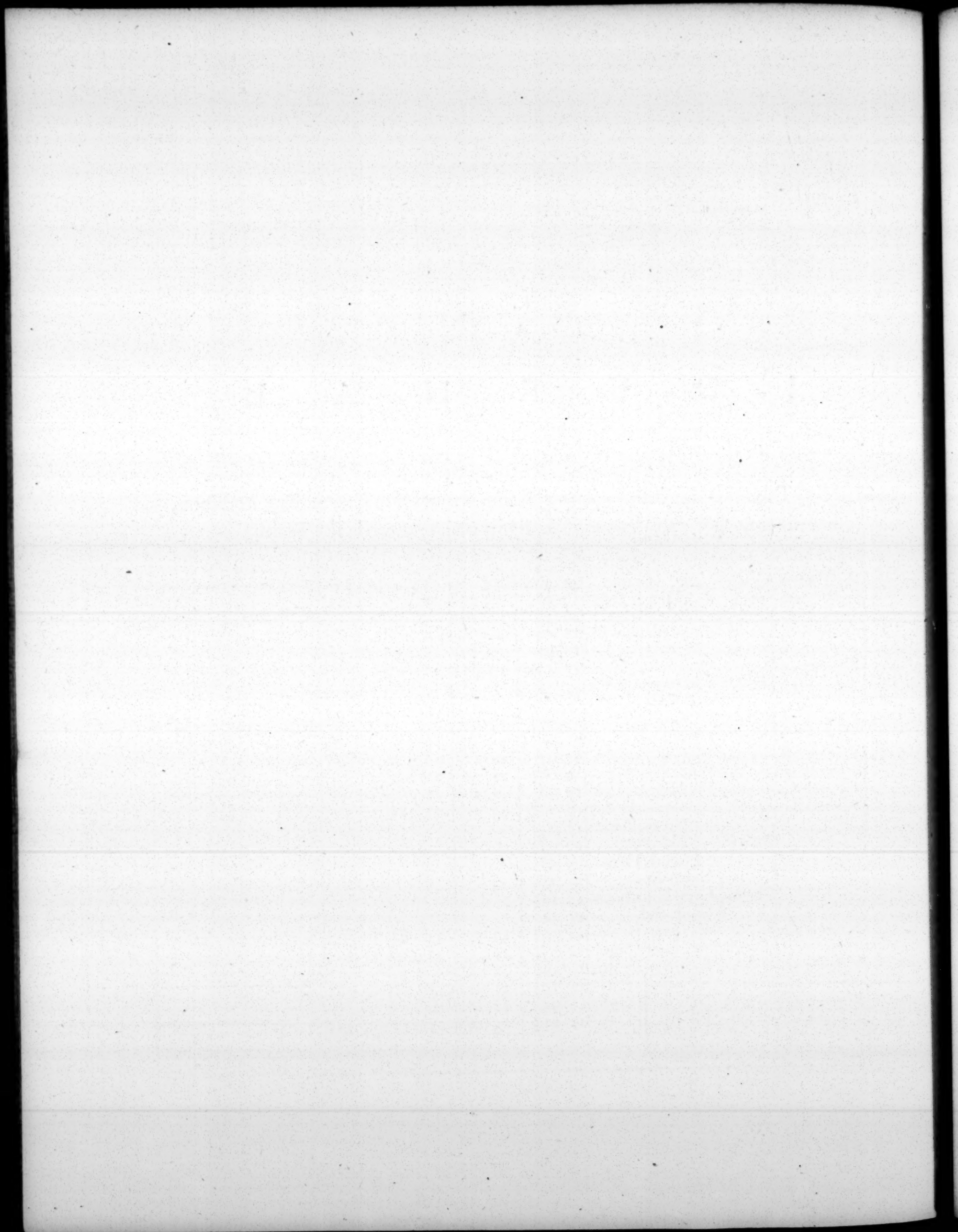
A
JOURNAL
OF THE

SITUATIONS of his Majesty's Sloop RESOLUTION each Day at Noon,
during her late Voyage on Discoveries towards the South;

As shewn by the Log, by two Time-keepers, one made by Mr. KENDALL, on
Mr. HARRISON's Principles, and the other by Mr. ARNOLD (No. 3.),
and also by Observation.

TOGETHER WITH

The LONGITUDES and LATITUDES of all Lands seen in that Voyage, as well
as the more remarkable Capes, Head-Lands, and Bays in them.



1772.	Course.	Dis- tance. Miles.	Latitude North		Longitude West					Swell Sets.
			By Ac- count.	By Obser- vation.	By Ac- count.	By Watch K.	By A, No. 3.	By Obser- vation.	Corrected.	
			° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	
D July 13.				50 5	4 34 $\frac{1}{8}$				4 34 $\frac{1}{8}$	
♂ — 14.	S. 6 $\frac{1}{2}$ W.	49	49 16	49 16 +	4 51				4 46	S.E.
♀ — 15.	S. 40 $\frac{1}{2}$ W.	32	48 52	48 50	5 22	5 18 $\frac{3}{8}$	4 50 $\frac{1}{8}$		5 22 $\frac{1}{2}$	S.E.
♂ — 16.	S. 40 $\frac{1}{2}$ W.	107	47 29	47 28 $\frac{1}{2}$	7 06 $\frac{1}{2}$	6 55 $\frac{3}{8}$	6 20 $\frac{3}{8}$		6 59 $\frac{1}{2}$	S.E.
♀ — 17.	S. 20 $\frac{1}{2}$ W.	64	46 28 $\frac{1}{2}$	46 24 $\frac{1}{2}$	7 40	7 29 $\frac{1}{8}$	6 53 $\frac{7}{8}$		7 33	E.
♂ — 18.	N. 45 W.	22 $\frac{1}{2}$	46 44 $\frac{1}{2}$	46 43	8 04	7 36 $\frac{1}{8}$	6 49 $\frac{1}{8}$		7 41	E.
⊙ — 19.	S. 22 W.	85	45 25	45 20	8 50	8 23 $\frac{3}{8}$	7 29 $\frac{1}{8}$		8 27 $\frac{1}{2}$	
	Cape Ortagal.			43 46 $\frac{1}{2}$					8 32	
D — 20.	S. 1 $\frac{1}{2}$ E.	68	44 12	43 54	8 48				8 28	
♂ — 21.	S. 59 $\frac{1}{2}$ W.	45	43 31	43 30	9 39 $\frac{1}{2}$				8 59 $\frac{1}{2}$	
♀ — 22.	South.	1	43 30	43 35	9 44 $\frac{1}{2}$	9 11 $\frac{3}{8}$	7 53 $\frac{3}{8}$	9 44 $\frac{1}{2}$	9 15	
♂ — 23.	S. 36 W.	88	42 24	42 18	10 50	10 27 $\frac{3}{8}$	9 02 $\frac{1}{8}$	10 23 $\frac{1}{2}$	10 27 $\frac{1}{2}$	
♀ — 24.	S. 25 $\frac{1}{2}$ W.	153	40 0	40 02	12 16	11 49 $\frac{1}{8}$	10 15 $\frac{1}{8}$	11 44	11 48 $\frac{1}{2}$	
♂ — 25.	S. 25 $\frac{1}{2}$ W.	158	37 40	37 40	13 42 $\frac{1}{2}$	13 10 $\frac{7}{8}$	11 24 $\frac{7}{8}$	13 10 $\frac{1}{2}$	13 10 $\frac{1}{2}$	
⊙ — 26.	W. 62 S.	145	35 32	35 31 $\frac{1}{2}$	15 08	14 28 $\frac{3}{8}$	12 34 $\frac{3}{8}$	14 36	14 28	
D — 27.	S. 19 $\frac{1}{2}$ W.	111	33 46 $\frac{1}{2}$	33 43	15 54	15 09 $\frac{7}{8}$	13 08 $\frac{1}{8}$	15 22	15 09 $\frac{1}{2}$	
♂ — 28.	S. 48 W.	82	32 48	32 48 $\frac{1}{2}$	17 02	16 36 $\frac{4}{8}$	14 26 $\frac{1}{8}$	16 30	16 36	
	Porto Sancto.			32 58 $\frac{1}{2}$					16 25 $\frac{1}{2}$	
	Fonchial, in Madeira.			32 33 $\frac{1}{2}$					17 11 $\frac{1}{2}$	
⊙ Aug. 2.				31 58					17 02	
D — 3.	S. by W.	135 $\frac{1}{2}$	29 45	29 42 $\frac{1}{2}$	18 22 $\frac{1}{2}$	17 29 $\frac{3}{8}$	14 25 $\frac{1}{8}$		17 34 $\frac{1}{2}$	
	N. E. end of Palma.			28 43					17 56 $\frac{1}{2}$	
	Middle of Palma.			28 36					18 0 $\frac{1}{2}$	
♂ — 4.	S. 35 W.	80		28 37	19 10 $\frac{1}{2}$	18 24 $\frac{1}{8}$	14 41 $\frac{1}{8}$		19 11 $\frac{1}{2}$	
♀ — 5.				27 55 $\frac{1}{2}$	19 38 $\frac{1}{2}$	18 50 $\frac{1}{8}$		18 52	18 53 $\frac{1}{2}$	
	Hummock, towards the S. end of Ferro.			27 42					18 09 $\frac{1}{2}$	
♂ — 6.	S. 11 $\frac{1}{2}$ W.	111	26 06 $\frac{1}{2}$	26 07 $\frac{1}{2}$	20 02 $\frac{1}{2}$			19 17	18 34 $\frac{1}{2}$	
♀ — 7.	S. 8 $\frac{1}{2}$ W.	128	24 0 $\frac{1}{2}$	24 06 $\frac{1}{4}$	20 23 $\frac{1}{2}$	19 31 $\frac{3}{8}$	15 02 $\frac{1}{8}$	19 45	19 24	
♂ — 8.	S. 8 W.	120	22 07	22 07	20 41 $\frac{1}{2}$	19 59 $\frac{1}{8}$	15 16 $\frac{1}{8}$	20 03 $\frac{1}{2}$	19 52	
⊙ — 9.	S. 19 $\frac{3}{4}$ W.	129	20 05 $\frac{1}{2}$	20 05 $\frac{1}{2}$	21 28	20 54 $\frac{1}{8}$	15 53 $\frac{1}{8}$	20 50	20 27	
D — 10.	S. 22 $\frac{1}{2}$ W.	151 $\frac{1}{2}$	17 46	17 48	22 29 $\frac{1}{2}$	22 06 $\frac{1}{8}$	16 48 $\frac{1}{8}$	21 51 $\frac{1}{2}$	21 59	
♂ — 11.	S. 22 W.	107	16 07 $\frac{1}{2}$	16 10 $\frac{1}{4}$	23 11	22 48 $\frac{7}{8}$	17 12 $\frac{3}{8}$	22 33	22 41 $\frac{1}{2}$	
	North Point.			16 13 $\frac{3}{8}$						
	Bonavista, { East Point.			16 03 $\frac{3}{8}$					22 44 $\frac{1}{2}$	
	{ South Point.			15 58:						
	North End.			15 15 $\frac{1}{2}$					23 03	
	Mayo, { Great Hummock.			15 12 $\frac{3}{8}$					23 04	
	{ South end.			15 11					23 10	
♀ — 12.	S. 30 W.	80 $\frac{1}{2}$	15 0	14 59 $\frac{1}{2}$	23 53	23 26 $\frac{1}{8}$	17 31 $\frac{1}{8}$	23 15	23 18	
	Port Praya, in St. Jago.			14 53 $\frac{7}{8}$					23 29 $\frac{3}{8}$	
♂ — 15.	S. 34 E.	76 $\frac{3}{4}$	13 49 $\frac{1}{2}$	13 49 $\frac{1}{2}$	23 9	23 36 $\frac{7}{8}$	17 42 $\frac{1}{8}$	23 40	23 34 $\frac{1}{2}$	
⊙ — 16.	S. 11 E.	90	12 21 $\frac{3}{4}$	12 19 $\frac{1}{8}$	22 51 $\frac{1}{2}$	23 0 $\frac{1}{8}$	15 51 $\frac{3}{8}$	22 13 $\frac{1}{2}$	22 52 $\frac{1}{2}$	
D — 17.	S. 59 $\frac{1}{2}$ E.	46	11 56	11 54	22 11 $\frac{1}{2}$			21 35 $\frac{1}{2}$	22 12 $\frac{1}{2}$	
♂ — 18.	S. 56 E.	53	11 26	11 22 $\frac{3}{8}$	21 26 $\frac{1}{2}$	21 21 $\frac{1}{8}$	13 34 $\frac{1}{8}$	20 50 $\frac{1}{2}$	21 13 $\frac{1}{2}$	

1772.	Course.	Distance.	Latitude North		Longitude West					Corrected.	Swell Sets.
			By Account.	By Observation.	By Account.	By Watch K.	By A. No. 3.	By Observation.			
		Miles.									
Aug. 19.	S. 24 E.	48	10 39	10 39	21 07	20 54 ³ / ₈	13 07 ⁷ / ₈	19 12 ¹ / ₄	20 47		
20.	S. 9 E.	86 ¹ / ₂	9 13 ¹ / ₃	9 13 ¹ / ₃	20 53			18 58 ¹ / ₄	20 08		
21.	S. 30 E.	40	8 38 ¹ / ₃	8 37	20 32			18 38 ¹ / ₄	19 21 ¹ / ₂		
22.	S. 54 E.	75	7 53	7 50	19 30 ¹ / ₂	18 01 ¹ / ₈	9 09 ¹ / ₈	17 36 ¹ / ₄	17 53 ¹ / ₂		
23.	S. 43 ¹ / ₂ E.	84 ¹ / ₂	6 48 ¹ / ₂	6 48 ¹ / ₃	18 29 ¹ / ₄	16 49 ¹ / ₈	7 44 ⁷ / ₈	16 31 ¹ / ₄	16 41 ¹ / ₂		
24.	S. 67 E.	74	6 20	6 23 ³ / ₄	17 21	15 27 ¹ / ₈	6 06 ¹ / ₈	14 46	15 19 ¹ / ₂		
25.	S. 56 E.	53	5 53 ¹ / ₂	5 54	16 37			14 02	14 12 ¹ / ₄		
26.	S. E.	64	5 08 ¹ / ₂	5 06 ¹ / ₂	15 51 ¹ / ₂			13 16 ¹ / ₂	13 03 ¹ / ₄		
27.	S. 48 E.	81	4 12	4 13	14 51	11 47 ⁷ / ₈	1 38 ¹ / ₈ East.	12 16	11 40 ¹ / ₄		
28.	S. 68 E.	75	3 45	3 42 ¹ / ₆	13 42	10 17 ³ / ₈	0 07 ⁷ / ₈	11 07	10 01 ¹ / ₄		
29.	S. 58 E.	63	3 08 ¹ / ₂	3 09 ¹ / ₄	12 48	8 59 ³ / ₈	1 35 ¹ / ₂	10 13	8 43 ¹ / ₄		
30.	S. 63 ¹ / ₂ E.	71	2 37	2 36	11 44	7 12 ¹ / ₈	3 39 ⁷ / ₈	9 09	6 56 ¹ / ₂		
31.	S. 85 E.	50	2 31 ² / ₃	2 33 ¹ / ₄	10 54	5 31 ¹ / ₈	5 42	8 19	5 15 ¹ / ₂		
Sept. 1.	S. 57 ¹ / ₂ W.	53	2 05	1 58 ¹ / ₂	11 38	5 40 ⁷ / ₈	6 02 ⁷ / ₈	9 03	5 25 ¹ / ₄		
2.	S. 44 W.	49	1 23	1 21 ¹ / ₂	12 12 ¹ / ₂	6 24 ³ / ₄	5 23 ² / ₃	5 35	6 09		
3.	S. 71 W.	82	0 56	0 59	13 30			6 52 ¹ / ₂	7 37 ¹ / ₂		
4.	S. 80 W.	66	0 45	0 50 ³ / ₄	14 35	9 09 ¹ / ₈	3 10 ¹ / ₈	7 57 ¹ / ₂	8 53 ¹ / ₂		
The current set N. by E. 32 feet in a minute.											
5.	S. 78 W.	10 ¹ / ₄	0 48 ¹ / ₂	0 53 ¹ / ₃	14 45	9 12 ¹ / ₈	3 20 ⁷ / ₈	9 54	8 56 ¹ / ₂		
6.	S. 64 E.	55	0 29 ¹ / ₃	0 33 ¹ / ₂	13 55 ¹ / ₂	7 52 ¹ / ₈	4 54 ⁷ / ₈	9 0	7 36 ¹ / ₂		
7.	S. 83 E.	47	0 28	0 23	13 09			8 22	7 17 ¹ / ₂		
South. South. Crossed the Equinoctial.											
8.	S. 60 W.	71		0 18	14 10 ¹ / ₂	9 02 ³ / ₄	4 52 ³ / ₄	7 58 ¹ / ₄	8 47		
9.	S. 48 W.	50	0 51 ¹ / ₄	0 59	14 48	9 45 ³ / ₄	4 25 ¹ / ₈	9 26	9 30		
10.	S. 54 W.	68	1 54	2 0	15 28	10 52 ³ / ₄	2 52 ⁷ / ₈	10 06	10 37		
11.	S. 33 W.	70	2 59	3 05 ¹ / ₂	16 06 ¹ / ₂	12 17 ³ / ₄	2 08 ¹ / ₈	10 44 ¹ / ₂	12 02		
12.	S. 22 W.	67	4 08 ² / ₃	4 12	16 32	13 16 ¹ / ₈	1 35 ¹ / ₄	11 10	13 0 ¹ / ₂		
13.	S. 36 W.	73	5 10	5 12	17 14	14 16 ¹ / ₈	0 49 ⁷ / ₈	14 21 ¹ / ₄	14 21 ¹ / ₂		
14.	S. 29 ¹ / ₂ W.	92		6 32	17 59 ¹ / ₂	15 08 ¹ / ₈	0 22 ¹ / ₈	15 13 ¹ / ₄	15 13 ¹ / ₄		
15.	S. 18 ¹ / ₂ W.	109 ¹ / ₂		8 16 ¹ / ₂	18 34 ¹ / ₂				16 22 ¹ / ₄		
16.	S. 23 W.	79	9 29 ¹ / ₄	9 29 ¹ / ₄	19 04 ¹ / ₂		West.		17 25 ³ / ₄		
17.				11 04	19 32 ¹ / ₄	18 21 ¹ / ₃	1 17 ⁷ / ₈	18 26	18 26 ³ / ₄		
18.	S. 20 W.	92 ¹ / ₂		12 31	20 04 ¹ / ₄	18 37 ³ / ₄	1 45 ⁷ / ₈	17 56 ¹ / ₄	18 43 ¹ / ₄		
19.	S. 24 W.	102	14 04	14 07	20 46 ¹ / ₄	19 35 ¹ / ₈	2 21 ¹ / ₈	18 54 ¹ / ₄	19 40 ¹ / ₂		
20.	S. 16 W.	91	15 34	15 38	21 12 ¹ / ₄	20 12 ¹ / ₈	2 37 ³ / ₄	20 06 ¹ / ₄	20 17		
21.	S. 21 W.	95 ¹ / ₂	17 07	17 14	21 51				20 57 ¹ / ₂		
22.	S. 21 ¹ / ₂ W.	92 ¹ / ₂	18 39	18 46 ¹ / ₄	22 29 ¹ / ₂	21 32 ¹ / ₈	3 33 ⁷ / ₈	21 19 ¹ / ₄	21 37 ¹ / ₂		
23.	S. 14 W.	81	20 05 ¹ / ₄	20 12 ¹ / ₄	22 52	22 0 ¹ / ₈	3 53 ¹ / ₈	21 47 ¹ / ₄	22 05 ¹ / ₂		
24.	S. 17 W.	80 ¹ / ₂	21 29	21 35 ¹ / ₄	23 19 ¹ / ₄	22 33 ⁷ / ₈	4 0 ¹ / ₃	22 21	22 39 ³ / ₄		
25.	S. 31 W.	87	22 50	22 54 ¹ / ₂	24 10 ¹ / ₄				23 38 ¹ / ₄		
26.	S. 0 ¹ / ₄ W.	74 ¹ / ₂	24 09	24 17	24 11 ¹ / ₄	23 43 ¹ / ₈	4 30 ³ / ₄	23 30 ¹ / ₄	23 48 ¹ / ₂		
27.	S. 2 W.	26	24 43	24 44 ³ / ₄	24 12 ¹ / ₄	23 46 ¹ / ₈	4 21 ¹ / ₈	23 33 ¹ / ₄	23 51 ¹ / ₂		
28.	S. 23 E.	45	25 26 ¹ / ₄	25 29 ² / ₃	23 52 ¹ / ₄		East.		23 36 ³ / ₄		
29.	S. 59 E.	80	26 11	26 17 ¹ / ₂	22 25 ¹ / ₄				22 15 ¹ / ₄		
30.	S. 70 ¹ / ₂ E.	114	26 55 ¹ / ₄	26 58 ¹ / ₃	20 18 ¹ / ₄	20 08 ¹ / ₈	0 07 ⁷ / ₈	19 55 ¹ / ₄	20 13		

ON BOARD THE RESOLUTION.

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1772.	Course.	Distance.	Latitude South		Longitude West					Corrected.	Swell Sets.
			By Account.	By Observation.	By Account.	By Watch K.	By A. No. 3.	By Observation.			
									Miles.		
24 Oct.	1. S. 75 E.	107	27 26	27 28	18 14 $\frac{1}{2}$	18 09	2 23 $\frac{7}{8}$	17 56 $\frac{1}{2}$	18 14		
♀ —	2. S. 75 $\frac{1}{2}$ E.	46 $\frac{1}{2}$	27 39 $\frac{1}{2}$	27 38 $\frac{1}{2}$	17 29	17 07 $\frac{7}{8}$	3 42 $\frac{2}{3}$	17 01 $\frac{1}{2}$	17 13 $\frac{1}{2}$	N. E.	
h —	3. S. 67 $\frac{1}{2}$ E.	87	28 11 $\frac{1}{2}$	28 09 $\frac{1}{2}$	16 04	15 27 $\frac{1}{8}$	5 31 $\frac{2}{3}$	15 10 $\frac{1}{2}$	15 32 $\frac{1}{2}$	N. E.	
○ —	4. S. 67 $\frac{1}{2}$ E.	135 $\frac{1}{2}$	29 01	29 23	13 37	13 08 $\frac{7}{8}$	8 11 $\frac{2}{3}$	13 33	13 14 $\frac{1}{2}$		
D —	5. S. 88 $\frac{1}{2}$ E.	80 $\frac{1}{2}$	29 04	29 0 $\frac{1}{2}$	12 0	11 28 $\frac{1}{3}$	10 08 $\frac{7}{8}$	11 50	11 33 $\frac{3}{4}$		
♂ —	6. S. 12 W.	44 $\frac{1}{2}$	29 44	29 48 $\frac{1}{2}$	12 12 $\frac{3}{4}$	11 45 $\frac{1}{8}$	10 05 $\frac{1}{3}$	11 40	11 50 $\frac{1}{2}$		
♀ —	7. S. 2 $\frac{1}{2}$ W.	81	31 09 $\frac{1}{2}$	31 21	12 16 $\frac{1}{2}$	11 56 $\frac{1}{2}$	10 17 $\frac{7}{8}$	11 51 $\frac{1}{2}$	12 01 $\frac{3}{4}$		
24 —	8. S. 23 $\frac{1}{2}$ E.	76	32 30 $\frac{1}{2}$	32 45 $\frac{1}{2}$	11 33	11 29 $\frac{3}{8}$	10 56 $\frac{7}{8}$	11 24 $\frac{1}{4}$	11 34 $\frac{3}{4}$		
♀ —	9. S. 39 E.	83	33 50 $\frac{1}{2}$	34 0 $\frac{1}{8}$	10 21 $\frac{1}{2}$	10 16 $\frac{7}{8}$	12 22 $\frac{3}{4}$	10 11 $\frac{1}{2}$	10 22 $\frac{1}{4}$		
h —	10. S. 70 E.	84	34 29	34 28 $\frac{1}{2}$	8 42 $\frac{1}{4}$	8 23 $\frac{1}{8}$	14 36 $\frac{7}{8}$	8 18	8 27		
○ —	11. E. by S. $\frac{1}{2}$ S.	66 $\frac{1}{2}$	34 44 $\frac{1}{2}$	34 44 $\frac{1}{2}$	7 24 $\frac{1}{2}$	7 05 $\frac{7}{8}$	16 07 $\frac{3}{4}$	7 0 $\frac{1}{2}$	7 18 $\frac{1}{2}$		
D —	12. E. by S.	34 $\frac{1}{2}$	34 51 $\frac{1}{4}$	34 51 $\frac{3}{8}$	6 37 $\frac{1}{2}$	6 25 $\frac{1}{8}$	16 49 $\frac{7}{8}$	5 55 $\frac{1}{2}$	6 25		
♂ —	13. S. 62 $\frac{1}{2}$ E.	42	35 11 $\frac{1}{4}$	35 14 $\frac{1}{4}$	5 47 $\frac{1}{2}$				5 18		
♀ —	14. S. 77 E.	89	35 34 $\frac{1}{2}$	35 32 $\frac{1}{2}$	4 12	3 25 $\frac{1}{8}$	20 0 $\frac{1}{3}$	2 55 $\frac{1}{2}$	3 19		
24 —	15. S. 85 E.	85	35 40	35 32 $\frac{1}{2}$	2 28 $\frac{1}{2}$	1 22 $\frac{1}{3}$	22 46 $\frac{2}{3}$	0 53	1 14		
♀ —	16. N. 81 E.	135	35 17	35 17	0 15 $\frac{1}{2}$	1 37 $\frac{2}{3}$	26 01 $\frac{7}{8}$	2 06 $\frac{3}{4}$	1 46		
The water discoloured, as if we were in foundings.											
h —	17. N. 82 E.	110	35 01 $\frac{2}{3}$	35 0	2 28 $\frac{3}{4}$	3 59 $\frac{2}{3}$	28 33 $\frac{7}{8}$	4 41 $\frac{3}{4}$	4 09		
○ —	18. N. 80 E.	128	34 37 $\frac{1}{2}$	34 37 $\frac{1}{2}$	5 04 $\frac{1}{4}$	6 31 $\frac{7}{8}$	31 28 $\frac{7}{8}$	7 14 $\frac{1}{4}$	6 43		
D —	19. N. 71 E.	60	34 21 $\frac{3}{4}$	34 19	6 11 $\frac{3}{4}$	7 26 $\frac{2}{3}$	32 35 $\frac{7}{8}$	8 08 $\frac{3}{4}$	7 37 $\frac{1}{2}$		
♂ —	20. S. 29 E.	29	34 44 $\frac{1}{2}$	34 48 $\frac{3}{4}$	6 29	7 36 $\frac{3}{4}$	32 57 $\frac{1}{8}$	8 02 $\frac{1}{2}$	7 47 $\frac{1}{2}$		
♀ —	21. S. 5 E.	55	35 42 $\frac{3}{4}$	35 39	6 34 $\frac{3}{4}$	7 21 $\frac{2}{3}$	33 07 $\frac{7}{8}$	7 59 $\frac{1}{2}$	7 32 $\frac{1}{2}$		
24 —	22. S. S. E.	76	36 50	36 52 $\frac{1}{4}$	7 11 $\frac{3}{4}$	8 09 $\frac{2}{3}$	33 58 $\frac{1}{8}$	8 47 $\frac{1}{3}$	8 20 $\frac{1}{2}$		
♀ —	23. S. 65 E.	37 $\frac{1}{2}$	37 08 $\frac{1}{4}$	37 12 $\frac{3}{4}$	7 54 $\frac{3}{4}$	9 0 $\frac{2}{3}$	35 02 $\frac{2}{3}$	9 38 $\frac{1}{2}$	9 11 $\frac{1}{2}$		
h —	24. E. N. E. $\frac{1}{4}$ E.	91	36 42	36 38	9 42	11 0 $\frac{3}{4}$	37 26 $\frac{2}{3}$	11 38 $\frac{3}{4}$	11 11 $\frac{1}{4}$		
○ —	25. N. 63 E.	136	35 37	35 37	12 12 $\frac{1}{2}$				13 23 $\frac{3}{4}$		
D —	26. N. 49 E.	91	34 37 $\frac{1}{2}$	34 29 $\frac{1}{2}$	13 37 $\frac{1}{4}$	14 18 $\frac{7}{8}$	41 16 $\frac{1}{3}$	14 57	14 30	W.	
Sounded: No ground with 210 fathoms.											
♂ —	27. N. 45 E.	79	33 44	33 43	14 44 $\frac{1}{2}$	15 11 $\frac{1}{8}$	42 25 $\frac{1}{3}$	15 49 $\frac{1}{2}$	15 22 $\frac{1}{4}$	W.	
Sounded: No ground with 200 fathoms.											
♀ —	28. N. 89 E.	53	33 43	33 41 $\frac{1}{2}$	15 46 $\frac{1}{3}$	15 56 $\frac{7}{8}$	43 27 $\frac{2}{3}$	16 35	16 08		
Sounded: No ground with 220 fathoms.											
24 —	29. S. 81 E.	74	33 53 $\frac{1}{2}$	33 53 $\frac{1}{2}$	17 14				17 30		
Cape of Good Hope.											
			33 57	33 56	18 10 $\frac{1}{2}$	18 12 $\frac{1}{4}$	47 18 $\frac{3}{8}$	18 50	18 23 $\frac{1}{4}$		
D Nov.	23. S. 46 W.	58	34 37	34 36 $\frac{1}{2}$	17 32 $\frac{1}{4}$	17 45 $\frac{3}{4}$	17 29 $\frac{1}{2}$		17 43 $\frac{1}{2}$	N.	
♂ —	24. S. 10 E.	50	35 25	35 23 $\frac{1}{3}$	17 42 $\frac{1}{4}$	17 58 $\frac{1}{8}$	17 35		17 55 $\frac{1}{2}$	N.	
♀ —	25. S. 20 W.	98	36 55 $\frac{1}{2}$	37 14	16 52 $\frac{1}{4}$	16 38 $\frac{3}{8}$	16 02 $\frac{1}{2}$		16 38 $\frac{1}{2}$		
24 —	26. S. 11 W.	99	38 51	39 03 $\frac{1}{2}$	16 25 $\frac{1}{4}$	15 34 $\frac{1}{8}$	15 02 $\frac{2}{3}$		15 34 $\frac{1}{2}$		
♀ —	27. S. 27 E.	67	40 03	40 05 $\frac{1}{8}$	17 06 $\frac{1}{4}$	16 31 $\frac{1}{2}$	15 53 $\frac{1}{2}$		16 31 $\frac{1}{2}$		
h —	28. S. 4 E.	55	40 58	40 58 $\frac{2}{3}$	17 11 $\frac{1}{4}$				16 31		
○ —	29. S. 3 E.	69	42 07 $\frac{2}{3}$	42 08	17 16 $\frac{1}{4}$	16 30 $\frac{1}{2}$	15 42 $\frac{1}{2}$		16 30 $\frac{2}{3}$		
D —	30. S. 60 E.	29	42 22 $\frac{1}{2}$	42 22	17 50 $\frac{1}{4}$				17 13 $\frac{1}{2}$		
♂ Dec.	1. S. 8 E.	53	43 14 $\frac{1}{2}$	43 14 $\frac{1}{2}$	18 0 $\frac{1}{4}$				17 32 $\frac{1}{4}$		

ASTRONOMICAL OBSERVATIONS

1772.		Course.	Distance. Miles.	Latitude South		Longitude East				Corrected.	Swell Sets.
				By Ac- count.	By Obser- vation.	By Ac- count.	By Watch K.	By A. No. 3.	By Obser- vation.		
				°	°	°	°	°	°		
8	Dec. 2	S. 49 E.	40	43 40 $\frac{3}{4}$	43 40 $\frac{3}{4}$	18 41 $\frac{1}{4}$	18 22 $\frac{1}{8}$	17 22 $\frac{1}{4}$		18 22 $\frac{1}{4}$	
4	— 3	S. 4 E.	45	44 25 $\frac{3}{4}$	44 25 $\frac{3}{4}$	18 45 $\frac{1}{4}$	18 25 $\frac{1}{2}$	17 26 $\frac{1}{4}$		18 25 $\frac{3}{4}$	
2	— 4	S. 19 E.	83	45 44	45 45	19 23 $\frac{3}{4}$	18 29 $\frac{1}{4}$	17 25 $\frac{1}{4}$		18 29 $\frac{1}{2}$	
h	— 5	S. 23 W.	92	47 09 $\frac{3}{4}$	47 09 $\frac{1}{2}$	18 31 $\frac{3}{4}$	17 59 $\frac{1}{3}$	16 46 $\frac{1}{4}$	17 15 $\frac{2}{3}$	17 59 $\frac{1}{2}$	
o	— 6	S. 5 W.	77	48 26 $\frac{1}{4}$	48 34 $\frac{1}{2}$	18 20 $\frac{3}{4}$	18 9 $\frac{1}{2}$	16 47 $\frac{1}{4}$	17 42 $\frac{5}{8}$	18 09 $\frac{3}{4}$	
D	— 7	S. 4 W.	83.8	49 58 $\frac{1}{4}$	49 50	18 12 $\frac{3}{4}$				18 17	
8	— 8	S. 71 E.	39	50 01 $\frac{3}{4}$	50 02	19 10	No ground with 100 fa- thoms.				19 32
8	— 9	N. 54 E.	32	49 43	49 45	19 50				20 30	
		Met with the 1st Ice Island.								20 53	
4	— 10	S. 5 E.	78	51 02 $\frac{3}{4}$	51 04 $\frac{3}{4}$	20 01	21 17 $\frac{1}{8}$	19 31 $\frac{1}{8}$	20 16 $\frac{1}{2}$	21 02 $\frac{1}{8}$	
2	— 11	S. 10 E.	45	51 47	51 49 $\frac{2}{3}$	20 13 $\frac{1}{2}$	21 35 $\frac{1}{2}$	19 58 $\frac{1}{4}$	20 50	21 35 $\frac{3}{4}$	
h	— 12	S. 25 E.	59	52 42 $\frac{1}{4}$	52 43	19 34	No ground with 150 fa- thoms.				20 59 $\frac{1}{4}$
o	— 13	S. 5 E.	64	53 46	53 48	19 42 $\frac{3}{4}$				21 11	
D	— 14	S. 26 E.	72	54 50 $\frac{3}{4}$	54 55 $\frac{1}{3}$	20 36 $\frac{3}{4}$	22 9 $\frac{1}{8}$	20 24 $\frac{1}{4}$	21 22 $\frac{1}{2}$	22 09 $\frac{1}{2}$	
		The current set S. S. E. 40 feet in a minute.									
8	— 15	S. 58 E.	14	55 02 $\frac{3}{4}$	55 04	20 57 $\frac{1}{2}$				22 40	
8	— 16	N. 2 E.	3	54 59 $\frac{3}{4}$	55 0	20 57 $\frac{3}{4}$				22 50 $\frac{3}{4}$	
4	— 17	S. 58 E.	30	55 15 $\frac{2}{3}$	55 16	21 45 $\frac{1}{4}$	23 46	22 0 $\frac{1}{4}$	22 58 $\frac{1}{2}$	23 46 $\frac{1}{4}$	
		Tacked from the Ice.								24 11	
2	— 18	N. 38 W.	22	54 58 $\frac{2}{3}$	54 58 $\frac{2}{3}$	21 18 $\frac{1}{2}$				23 55 $\frac{1}{2}$	
		Stood Eastward.								23 35 $\frac{1}{2}$	
h	— 19	N. 37 E.	47	54 21 $\frac{1}{4}$	54 21 $\frac{1}{4}$	22 07 $\frac{1}{4}$	25 33 $\frac{1}{8}$	23 41 $\frac{3}{4}$	24 45	25 33 $\frac{1}{8}$	
o	— 20	N. 75 E.	82	54 0	54 0	24 21 $\frac{7}{8}$	No ground with 150 fa- thoms.				28 09 $\frac{3}{4}$ S.
		Stood Southward.								29 51	
D	— 21	S. 78 E.	43	54 09	54 10 $\frac{1}{3}$	25 33 $\frac{7}{8}$	29 39 $\frac{7}{8}$	27 45	28 51 $\frac{1}{4}$	29 43 $\frac{7}{8}$	
8	— 22	S. 26 E.	47	54 52 $\frac{1}{2}$	54 54	26 09	30 24 $\frac{1}{2}$	28 37 $\frac{1}{4}$	29 45 $\frac{1}{2}$	30 39	
		Sounded: No ground with 130 fathoms.									
8	— 23	S. 57 E.	56	55 24 $\frac{1}{2}$	55 25 $\frac{1}{2}$	27 31 $\frac{1}{2}$				32 01 $\frac{1}{2}$	
4	— 24	S. 9 W.	66	56 30 $\frac{3}{4}$	56 31 $\frac{3}{4}$	27 13	31 42	29 40	30 52 $\frac{1}{2}$	31 47 $\frac{1}{2}$	
2	— 25	S. 23 W.	78	57 43 $\frac{1}{2}$	57 44	26 16 $\frac{3}{4}$				29 51	W.
h	— 26	S. 51 W.	72	58 29	58 31 $\frac{1}{3}$	24 31 $\frac{1}{4}$	27 9 $\frac{3}{8}$	25 03 $\frac{3}{4}$	26 19 $\frac{1}{2}$	27 16	W.
o	— 27	N. 80 W.	73	58 18 $\frac{1}{2}$	58 20	22 14 $\frac{1}{4}$	25 6 $\frac{1}{4}$	22 59	24 16	25 14 $\frac{1}{4}$	W.
		Sounded: No ground with 220 fathoms.									
D	— 28	S. 69 W.	62	58 42 $\frac{1}{4}$	58 44 $\frac{1}{3}$	20 23	22 6 $\frac{5}{8}$	19 58	21 16	22 15 $\frac{3}{4}$	
8	— 29	S. 72 W.	90	59 12 $\frac{1}{4}$	59 12	17 38 $\frac{1}{2}$				19 12 $\frac{3}{4}$	
2	— 30	S. 79 W.	57	59 23	59 23	16 04 $\frac{3}{4}$	17 13 $\frac{1}{2}$	14 46 $\frac{2}{3}$	16 22 $\frac{3}{8}$	17 24 $\frac{1}{4}$	
4	— 31	S. 61 W.	68	59 56	59 48 $\frac{1}{3}$	15 08				15 40 $\frac{3}{4}$	
1773.											
2	Jan. 1	S. 63 W.	48	60 17 $\frac{3}{4}$	60 02 $\frac{1}{3}$	13 42				13 27 $\frac{3}{4}$	
h	— 2	N. 49 W.	80	59 24	59 04	11 40 $\frac{1}{2}$	10 28 $\frac{3}{8}$	8 15 $\frac{1}{4}$	9 36 $\frac{3}{8}$	10 41	
		Stood Eastward.								10 32	
o	— 3	S. 89 E.	40 $\frac{1}{2}$	59 24 $\frac{3}{4}$	59 18 $\frac{1}{2}$	12 59 $\frac{1}{4}$				11 42 $\frac{1}{4}$	
D	— 4	N. 84 E.	109	59 13 $\frac{1}{3}$	59 01 $\frac{5}{6}$	16 31 $\frac{3}{4}$				15 06 $\frac{1}{4}$	
8	— 5	S. 71 E.	153	59 51 $\frac{2}{3}$	59 51	21 17 $\frac{1}{4}$				19 43 $\frac{1}{4}$	
8	— 6	S. 77 E.	139	60 23	60 21 $\frac{1}{4}$	25 48 $\frac{1}{4}$				24 06 $\frac{3}{4}$	
4	— 7	S. 81 E.	135	60 44	60 40 $\frac{5}{8}$	30 19 $\frac{1}{2}$	28 10 $\frac{5}{8}$	26 05 $\frac{3}{4}$	28 05	28 26 $\frac{5}{8}$	

ON BOARD THE RESOLUTION.

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1773	Course.	Distance.	Latitude South		Longitude West					Corrected.	Swell Sets.
			By Account.	By Observation	By Account.	By Watch K.	By A. No. 3.	By Observation.			
									Miles.		
♀ Jan. 8.	S. 72 E.	136	61 23	61 21½	34 46½	32 23¾	30 08¾	32 45¼	32 40		
h — 9.	S. 75 E.	64	61 38½	61 36	36 55½	34 30	32 15½	34 51	34 46½		
○ — 10.	S. 55 E.	41	61 59½	62 0	38 06½	36 1½	33 48	36 22½	36 19		
h — 11.	S. 27 E.	89½	63 20	63 20	39 35½	37 15½	35 03	37 36¼	37 33½		
♂ — 12.	S. 32 E.	61	64 11½	64 11½	40 49	38 4½	35 53¾	38 25	38 22¾		
The current set N. N. W. 27 feet a minute.											
♀ — 13.	S. 63 E.	17	64 19½	64 16½	41 23½	38 34¾	36 24¼	38 54¾	38 53		
h — 14.	N. 23 E.	21	63 57½	63 57	41 42	38 57¾	36 51¼	39 51½	39 16¾		
♀ — 15.	N. 30 E.	27	63 33½	63 32½	42 12½	39 4	37 0¼	40 01	39 23		
h — 16.	S. 2 E.	56	64 29	64 31	42 16½	38 48½	36 47½	39 51¾	39 07¾		
○ — 17.	S. 5 E.	126	66 36½	66 36½	42 43	38 54	36 55½	39 57	39 13¾	W.	
Ice: Stood Northward.											
h — 18.	N. 21 E.	44	65 55½	65 59½	43 21½	38 45½	36 48½	39 49	39 05¼		
♂ — 19.	N. 10 E.	88	64 32½	64 29½	43 58½	39 32½	37 35½	40 34½	39 52¾		
♀ — 20.	North.	29	64 0	63 58½	43 58½	39 44¾	37 48½	40 47	40 05¾		
h — 21.	N. 31 E.	81	62 50½	62 47½	45 32	40 48½	38 52¾	41 50	41 09¼		
♀ — 22.	N. 43 E.	100	61 34½	61 33½	47 58	42 55¾	41 14¾	43 56½	43 16½		
h — 23.	N. 46 E.	128	60 04½	60 02½	50 54½	45 46	43 51¼	46 47	46 07¼		
○ — 24.	N. 40 E.	131	58 22½	58 24½	53 36½	48 55	46 59¾	49 50	49 16½		
h — 25.	N. 65 E.	76	57 52	57 53½	55 47½				51 15	W.	
♂ — 26.	North.	48	57 04	57 07	55 47½				51 03¾	W.	
♀ — 27.	N. 23 E.	44	56 23½	56 28	56 15	50 55¾	49 04¾	51 55½	51 17¾	W.	
h — 28.	N. 17 E.	124	54 29½	54 28½	57 18¾	51 48¾	50 12¾	51 34	52 11¼		
♀ — 29.	N. 28 E.	137	52 27½	52 29	59 05¼				54 25¼		
h — 30.	N. 51 E.	87	51 33	51 31	60 18¾				56 07½		
○ — 31.	N. 47 E.	53	50 56½	50 52	61 12¾	57 8	55 22¾	56 52	57 31¼		
h Feb. 1.	N. 10 E.	121	48 53	48 51½	61 45½	57 41¾	55 58	57 25¾	58 04¾		
Penguins, divers, and } sea-weed. Bore away. }											
♂ — 2.	N. 79 E.	82	48 35½	48 36½	63 44	59 57½	58 16¼	59 41¼	60 21½		
Stood North East.											
Stood North West.											
♀ — 3.	S. 65 E.	34	48 50½	48 50½	64 30¾	60 45	59 05¾	60 28½	61 09	S.S.E.	
h — 4.	S. 70 W.	74	49 16	49 15	62 46½	59 33½	57 59¼	59 16½	59 57½	S. E.	
Stood North East.											
Stood North West.											
♀ — 5.	N. 77 W.	37	49 06½	49 07	61 51¼	58 48½	57 16½	58 31½	59 13		
Stood North West.											
Stood South East.											
h — 6.	N. 10 E.	66	48 01½	48 06½	62 07½	59 3½	57 31½	58 46	59 28	S.	
○ — 7.	S. 72½ E.	144	48 49	48 51½	65 09¾	62 15¾	60 42½	61 57¾	62 40¾		
h — 8.	S. 54½ E.	106	49 50	49 50	67 23½				64 53¾		
♂ — 9.	S. 20 W.	11	50 0½	50 01	67 17	64 21½		64 03	64 46½		
♀ — 10.	S. 88 E.	38	50 02½	50 06½	68 16	65 10¾	63 53½	65 01½	65 36½		
h — 11.	S. 50 E.	120	51 23½	51 14½	70 41½	67 46½	66 22	67 27½	68 12½		

1773.	Course.	Dis- tance.	Latitude South		Longitude East					Swell fets.
			By Ac- count.	Observa- tion.	By Ac- count.	By Watch K.	By A. No. 3.	By Obser- vation.	Corrected.	
		Miles.								
♀ Feb. 12.	S. 51 E.	148	52 56 $\frac{1}{2}$	52 48	73 49	70 34 $\frac{3}{4}$	69 11 $\frac{1}{4}$	70 48	71 01	
h — 13.	S. 54 E.	111	53 53 $\frac{1}{4}$	53 54 $\frac{2}{3}$	76 18 $\frac{3}{4}$	72 53 $\frac{7}{8}$	71 33 $\frac{1}{4}$	73 21 $\frac{1}{2}$	73 20 $\frac{3}{8}$	
○ — 14.	S. 48 E.	125 $\frac{1}{2}$	55 18 $\frac{2}{3}$	55 18 $\frac{2}{3}$	78 0	73 35 $\frac{5}{8}$	72 19 $\frac{1}{4}$	74 3	74 02 $\frac{3}{8}$	S. b. E.
D — 15.	S. 56 E.	163	56 49 $\frac{2}{3}$	56 50	82 1 $\frac{1}{2}$	79 12 $\frac{7}{8}$	77 54 $\frac{3}{4}$	79 40	79 39 $\frac{7}{8}$	
♂ — 16.	S. 70 E.	75	57 15 $\frac{1}{3}$	57 15 $\frac{1}{2}$	84 11 $\frac{1}{2}$	81 20 $\frac{3}{4}$	80 4	81 47 $\frac{1}{2}$	81 47 $\frac{1}{4}$	
♀ — 17.	S. 44 E.	56	57 55 $\frac{1}{4}$	57 54 $\frac{3}{4}$	85 24 $\frac{1}{4}$				82 38	
u — 18.	S. 86 E.	57	57 59 $\frac{1}{4}$	57 57	87 11 $\frac{1}{4}$	83 34 $\frac{1}{2}$	82 21 $\frac{1}{2}$	83 49	84 2 $\frac{1}{2}$	
♀ — 19.	S. 76 E.	135	58 29 $\frac{1}{2}$	58 30	91 20 $\frac{1}{4}$				88 07	S.
h — 20.	S. 81 $\frac{1}{2}$ E.	122	58 47 $\frac{1}{4}$	58 46 $\frac{3}{4}$	95 11 $\frac{3}{4}$	91 25 $\frac{1}{8}$	90 15 $\frac{1}{4}$	91 38 $\frac{3}{4}$	91 54 $\frac{1}{8}$	
○ — 21.	S. 67 E.	29	58 58	59 0	96 3 $\frac{1}{4}$	92 20 $\frac{5}{8}$	91 12	92 33 $\frac{7}{8}$	92 50 $\frac{1}{8}$	
D — 22.	S. 46 E.	47 $\frac{1}{2}$	59 31	59 35	97 10 $\frac{3}{4}$	93 34	92 27	93 47	94 04	
♂ — 23.	S. 20 E.	90	60 55 $\frac{1}{4}$	61 1 $\frac{1}{3}$	98 13 $\frac{1}{4}$				94 56 $\frac{1}{2}$	
♀ — 24.	S. 46 E.	28	61 20 $\frac{1}{4}$	61 20 $\frac{3}{4}$	98 55 $\frac{3}{4}$				95 29	
u — 25.	N. 16 E.	33	60 49	60 48 $\frac{3}{4}$	99 14	95 6 $\frac{1}{4}$	94 6 $\frac{1}{4}$	95 18 $\frac{3}{8}$	95 37 $\frac{1}{4}$	
♀ — 26.	S. 76 $\frac{1}{2}$ E.	81 $\frac{1}{2}$	61 7 $\frac{3}{4}$	61 8	101 58	97 32	96 33 $\frac{1}{2}$	97 43 $\frac{3}{4}$	98 04	
h — 27.	N. 55 E.	77	60 24	60 24	104 27				100 37	
○ — 28.		136	59 58	59 57 $\frac{1}{2}$	108 54 $\frac{1}{4}$	104 34 $\frac{1}{2}$	103 39	104 45 $\frac{1}{4}$	105 08	S. W.
D March 1.	S. 67 $\frac{1}{2}$ E.	94	60 34	60 34	111 48 $\frac{3}{4}$				108 14	S. W.
♂ — 2.	S. 40 W.	13	60 44	60 44	111 32 $\frac{1}{4}$				108 09	
♀ — 3.	N. 64 E.	65 $\frac{1}{2}$	60 15 $\frac{2}{3}$	60 16 $\frac{1}{3}$	113 32	109 45 $\frac{1}{2}$	108 51	109 56 $\frac{1}{4}$	110 20 $\frac{1}{4}$	
u — 4.	S. 82 E.	105	60 32	60 35	117 2 $\frac{1}{2}$				113 55 $\frac{1}{4}$	S.
♀ — 5.	S. 88 E.	108	60 34 $\frac{2}{3}$	60 38 $\frac{1}{3}$	120 43	116 53 $\frac{1}{8}$	115 55	117 03 $\frac{1}{4}$	117 29 $\frac{7}{8}$	S.
h — 6.	N. 34 E.	42	60 3 $\frac{1}{3}$	60 9 $\frac{3}{4}$	121 30 $\frac{3}{4}$	118 0 $\frac{3}{8}$	117 13 $\frac{1}{4}$	118 10 $\frac{1}{4}$	118 37 $\frac{7}{8}$	S. E.
○ — 7.	N. 86 E.	56	59 59 $\frac{1}{3}$	60 12	123 21 $\frac{3}{5}$				120 25 $\frac{3}{8}$	
D — 8.	N. 41 E.	45	59 25	59 43 $\frac{1}{4}$	124 19	120 40 $\frac{1}{4}$	119 58 $\frac{1}{2}$	120 49 $\frac{1}{2}$	121 19 $\frac{1}{4}$	
♂ — 9.	N. 48 E.	77	58 53 $\frac{3}{4}$	58 55 $\frac{1}{2}$	126 4 $\frac{1}{2}$				123 01 $\frac{5}{8}$	
♀ — 10.	N. 71 E.	154	58 5 $\frac{1}{2}$	58 6	130 43 $\frac{3}{4}$				127 37 $\frac{1}{4}$	S.
u — 11.	S. 85 $\frac{1}{2}$ E.	91	58 16 $\frac{1}{2}$	58 9	133 35 $\frac{3}{4}$	129 45 $\frac{3}{8}$	129 6 $\frac{1}{4}$	129 54 $\frac{1}{4}$	130 26 $\frac{3}{8}$	S.
♀ — 12.	S. 48 E.	69	58 55 $\frac{3}{4}$	58 55 $\frac{1}{2}$	135 14	131 4 $\frac{5}{8}$	130 25 $\frac{1}{2}$	131 12 $\frac{1}{4}$	131 46 $\frac{5}{8}$	S.
h — 13.	N. 76 E.	55	58 42 $\frac{1}{4}$	58 42	136 57 $\frac{1}{2}$	132 41 $\frac{1}{4}$	132 4 $\frac{1}{2}$	132 49	133 24	S.
○ — 14.	N. 76 E.	86	58 21 $\frac{1}{4}$	58 21 $\frac{1}{2}$	139 37	135 17 $\frac{1}{8}$	134 42 $\frac{1}{4}$	136 15	136 0 $\frac{3}{4}$	
D — 15.	S. 69 E.	119	59 4 $\frac{1}{4}$	59 4 $\frac{1}{2}$	143 11	138 59 $\frac{1}{4}$	138 25 $\frac{3}{4}$	139 58 $\frac{1}{4}$	139 43 $\frac{1}{2}$	
♂ — 16.	N. 83 E.	110	58 50 $\frac{1}{4}$	58 51 $\frac{3}{4}$	146 42 $\frac{3}{4}$	142 9 $\frac{1}{2}$	141 36 $\frac{1}{4}$	143 8 $\frac{1}{4}$	142 54 $\frac{1}{2}$	E.
Stood to the Northward.				58 57					146 25 $\frac{1}{8}$	
♀ — 17.	N. 81 E.	148	58 28 $\frac{1}{4}$	58 28 $\frac{3}{4}$	151 32 $\frac{1}{2}$	146 35 $\frac{1}{8}$		147 33 $\frac{1}{2}$	147 20 $\frac{7}{8}$	
u — 18.	N. 30 E.	136	56 30 $\frac{3}{4}$	56 31 $\frac{1}{3}$	153 39	149 9 $\frac{1}{8}$	148 38 $\frac{1}{4}$	150 7 $\frac{1}{4}$	149 55 $\frac{5}{8}$	
♀ — 19.	N. 36 $\frac{1}{2}$ E.	144	54 35 $\frac{2}{3}$	54 46	156 10 $\frac{3}{4}$				152 11 $\frac{1}{2}$	E.
h — 20.	N. 49 $\frac{1}{2}$ E.	164	52 48	53 22 $\frac{1}{3}$	158 51 $\frac{1}{4}$	153 48	153 18 $\frac{3}{4}$	154 45 $\frac{1}{2}$	154 36	E.
○ — 21.	N. 31 $\frac{1}{2}$ E.	150	51 14 $\frac{1}{2}$	51 14 $\frac{1}{2}$	160 59 $\frac{3}{5}$				156 47 $\frac{1}{2}$	E.
D — 22.	N. 49 $\frac{1}{2}$ E.	123	49 55	49 55 $\frac{1}{4}$	163 26 $\frac{3}{5}$	158 27 $\frac{1}{2}$	158 2 $\frac{1}{4}$	159 24 $\frac{1}{2}$	159 17 $\frac{1}{2}$	
♂ — 23.	N. 40 E.	169 $\frac{1}{2}$	47 45 $\frac{1}{2}$	47 45 $\frac{1}{2}$	166 6 $\frac{1}{4}$	160 45 $\frac{5}{8}$	160 23 $\frac{3}{4}$	161 42 $\frac{1}{4}$	161 36 $\frac{5}{8}$	
♀ — 24.	N. 51 E.	115	46 32 $\frac{3}{4}$	46 32 $\frac{3}{4}$	168 19 $\frac{1}{4}$	162 50 $\frac{7}{8}$	162 29 $\frac{1}{2}$	163 47 $\frac{1}{4}$	163 42 $\frac{7}{8}$	
u — 25.	N. 79 E.	83	46 17	46 15	170 17 $\frac{1}{4}$				165 38	
♀ — 26.	N. 32 E.	35	45 45 $\frac{1}{4}$	45 45 $\frac{1}{4}$	170 44 $\frac{1}{4}$				166 4 $\frac{1}{4}$	
Observatory at Dusky Bay.				45 47 $\frac{5}{8}$					166 18 $\frac{1}{6}$	

ON BOARD THE RESOLUTION.

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1773.	Course.	Distance. Miles.	Latitude South		Longitude East					Swell sets.
			By Ac- count.	By Obser- vation.	By Ac- count.	By Watch K.	By A. No. 3.	By Obser- vation.	Corrected.	
			°	°	°	°	°	°	°	
♂ May 11.				45 37					166 41	
♀ — 12.	N. 23 E.	61	44 38½	44 36½	166 34½				167 17	
♂ — 13.	N. 34 E.	119	42 59½	42 55½	168 06½				168 57	
♀ — 14.	N. 51 E.	97½	41 58½	41 52½	169 49½	170 20½	169 54½		170 53½	
♂ — 15.	N. 32 E.	46½	41 13	41 13	170 22½	170 59½	170 29½		171 33½	
⊙ — 16.	N. 52 E.	23	40 59	40 58	170 51				172 17	
	Cape Farewell.			40 35½					172 47½	
♂ — 17.	N. 60 E.	43	40 37½	40 33½	171 48½	172 54½	172 29	173 33½	173 29½	
♂ — 18.	S. 66 E.	54	40 56	41 3					174 27½	
	Q. Charlotte's Sound.			41 6					174 18½	
♂ June 8.				41 56½		174 57½			175 36½	
♀ — 9.	S. 52 E.	91	42 52½	42 57½	176 37				177 32	
♂ — 10.	S. 52 E.	100½	43 54	43 54½	178 25½	179 02½		179 54	179 41½	N.W.
♀ — 11.	S. 52 E.	78½	44 43	44 46	179 52				181 0	N.W.
♂ — 12.	S. 59½ E.	109	45 38	45 44	182 04				183 24	N.W.
⊙ — 13.	S. 31 E.	43	46 15	46 24	182 36½				184 7½	
♂ — 14.	S. 71½ E.	25½	46 23	46 35	183 11½				184 53½	N.W.
♂ — 15.	S. 76 E.	32	46 31	46 46½	183 57½	185 23½		186 14½	185 58½	
♀ — 16.	S. 32 E.	33	46 59½	46 58	184 23				186 9	S.W.
♂ — 17.	N. 40 E.	50	46 21	46 18½	185 10	186 8		186 58½	186 41	S.W.
♀ — 18.	N. 75 E.	91	45 54½	45 54	187 16½	188 8		188 59½	188 41	
♂ — 19.	N. 59 E.	85	45 10	45 6	188 59				190 33½	
⊙ — 20.	N. 76 E.	114	44 42	44 34	191 35				193 3½	
♂ — 21.	N. 87 E.	67	44 38½	44 26	193 10	194 17½		195 9	194 48½	N.W.
♂ — 22.	S. 79 E.	66	44 39	44 35½	194 43	195 54½		196 46	196 25½	
♀ — 23.	S. 89 E.	50	44 37	44 37½	195 55	197 23		198 14½	197 53	
♂ — 24.	N. 8 W.	58	43 38	43 37	195 51				197 37	
♀ — 25.	N. 19 W.	23	43 16	43 14	195 41				197 15	
♂ — 26.	N. 69 E.	9	43 13	43 9½	195 53	196 47		196 24	197 15	
⊙ — 27.	N. 11 E.	36	42 34	42 34	196 2				197 17	
♂ — 28.	S. 86 E.	36	42 36	42 35	196 51				198 9½	
♂ — 29.	S. 54 E.	23	42 49	42 46½	197 19				198 40½	
♀ — 30.	S. 67 E.	59	43 9½	43 6	198 38				200 2½	
♂ July 1.	S. 82 E.	71	43 15	43 7½	200 21	201 26½		202 11½	201 49½	
♀ — 2.	N. 87 E.	64	43 4	43 2½	201 54	202 52½		203 2½	203 15½	
♂ — 3.	S. 72 E.	56	43 20	43 18	203 12	204 19½		204 29½	204 42½	
⊙ — 4.	S. 53 E.	51	43 57	43 58	203 56	205 10		205 20	205 32	S.W.
♂ — 5.	N. 62 E.	105	43 9	43 11	206 11	207 12		207 22	207 34	W.
♂ — 6.	N. 34 E.	76	42 6	42 7½	206 29	208 0		208 10	208 32	W.
♀ — 7.	N. 33 E.	52	41 23½	41 22	207 8	208 48½		209 10½	209 10½	
♂ — 8.	S. 64 E.	83	41 58½	41 59	208 59	210 48½		211 8½	211 10½	N.
♀ — 9.	S. 65 E.	91	42 37	42 39½	210 48	212 55½		213 15	213 17½	
♂ — 10.	S. 61 E.	132	43 43½	43 36½	213 32	215 27½		215 47	215 49½	
⊙ — 11.	S. 87 E.	99½	43 48½	43 34½	215 57	217 43½		217 49½	218 5½	
♂ — 12.	N. 79 E.	79	43 18½	43 16	217 51	219 42½		219 28½	219 42½	
♂ — 13.	N. 79 E.	46	43 7	43 1½	218 57	220 51½		221 8	221 13½	

1773.	Course.	Distance. Miles.	Latitude South		Longitude East			Corrected.	Swell fcts.
			By Ac- count.	By Obser- vation.	By Ac- count.	By Watch K.	By Obser- vation.		
♂ July 14.	S. 79 E.	39	43 9	43 7	220 0			222 14	
♂ — 15.	N. 4 W.	30	42 40	42 36	219 57			222 08	
♀ — 16.	N. 51 E.	109	41 31	41 24	222 4	223 50 $\frac{1}{2}$	224 6 $\frac{3}{4}$	224 12 $\frac{1}{2}$	
♂ — 17.	N. 51 E.	136	39 58	39 43 $\frac{2}{3}$	224 48	226 10 $\frac{1}{4}$	226 26 $\frac{1}{2}$	226 32 $\frac{1}{4}$	
⊙ — 18.	N. 6 E.	108	37 56	37 56	225 2 $\frac{1}{2}$	226 22 $\frac{1}{2}$	226 38 $\frac{3}{4}$	226 44 $\frac{1}{2}$	
♂ — 19.	N. 8 E.	83	36 45 $\frac{1}{2}$	36 34 $\frac{1}{4}$	225 17	226 43	226 59 $\frac{1}{4}$	227 5	
♂ — 20.	N. 6 W.	74	35 23	35 20	225 7 $\frac{1}{2}$	226 33	226 49 $\frac{1}{4}$	226 55	
♂ — 21.	N. $\frac{1}{2}$ W.	156	32 44 $\frac{1}{2}$	32 44	224 48	225 49	226 5 $\frac{1}{4}$	226 12	
♂ — 22.	N. 15 W.	100 $\frac{1}{2}$	31 7 $\frac{3}{4}$	31 5 $\frac{1}{2}$	224 25	225 13 $\frac{1}{2}$	225 29 $\frac{3}{4}$	225 36 $\frac{1}{2}$	
♀ — 23.	N. 7 W.	98	29 28	29 22 $\frac{1}{4}$	224 10	224 52 $\frac{1}{2}$	225 8 $\frac{3}{4}$	225 15 $\frac{1}{2}$	
♂ — 24.	S. 67 W.	73	29 50 $\frac{1}{2}$	29 47	222 52			224 3	
⊙ — 25.	S. 88 W.	26	29 51 $\frac{1}{2}$	29 44 $\frac{1}{2}$	222 22	223 16 $\frac{1}{4}$	223 29 $\frac{3}{4}$	223 39 $\frac{1}{4}$	
♂ — 26.	N. 37 E.	66	28 51 $\frac{1}{2}$	28 52 $\frac{1}{4}$	223 7	224 15 $\frac{1}{2}$	224 37 $\frac{3}{4}$	224 38 $\frac{1}{2}$	
♂ — 27.	N. 16 E.	57	27 58	27 53 $\frac{1}{4}$	223 26 $\frac{1}{2}$	224 31 $\frac{1}{2}$	225 14	224 54 $\frac{1}{2}$	
♂ — 28.	N. 73 W.	27	27 44	27 43	223 13 $\frac{1}{2}$	223 58 $\frac{1}{2}$	224 52 $\frac{1}{8}$	224 21 $\frac{1}{2}$	
♂ — 29.	N. 69 W.	43	27 28	27 30 $\frac{1}{2}$	222 28 $\frac{1}{2}$	223 11 $\frac{1}{2}$	224 12	223 34 $\frac{1}{2}$	
♀ — 30.	N. 61 E.	55	27 4	27 4 $\frac{1}{4}$	223 22 $\frac{1}{2}$	224 13 $\frac{3}{4}$	225 14	224 37	
♂ — 31.	N. 18 E.	46	26 20 $\frac{1}{4}$	26 19 $\frac{1}{2}$	223 36 $\frac{1}{2}$	224 49 $\frac{1}{2}$	225 23 $\frac{3}{4}$	225 13	South.
⊙ Aug. 1.	N. 25 E.	85	25 2 $\frac{1}{2}$	25 2 $\frac{1}{2}$	224 16 $\frac{1}{2}$			225 54	
♂ — 2.	N. 3 E.	108	23 14 $\frac{1}{2}$	23 14	224 22 $\frac{1}{2}$	225 36 $\frac{3}{4}$	226 2 $\frac{1}{4}$	226 0 $\frac{1}{2}$	
♂ — 3.	N. 2 E.	60	22 12 $\frac{1}{2}$	22 8 $\frac{1}{3}$	224 24 $\frac{1}{2}$	225 51 $\frac{1}{2}$	227 7 $\frac{1}{2}$	226 15 $\frac{1}{2}$	
♂ — 4.	N. 13 E.	38	21 30	21 18	224 37	226 2 $\frac{1}{8}$	227 12 $\frac{1}{4}$	226 26 $\frac{1}{4}$	
♂ — 5.	N. 56 E.	70	20 38 $\frac{1}{4}$	20 39 $\frac{1}{4}$	225 37 $\frac{1}{2}$	227 30 $\frac{1}{4}$	228 40 $\frac{1}{4}$	227 54 $\frac{1}{2}$	
♀ — 6.	N. 33 E.	60	19 48	19 47 $\frac{1}{3}$	226 19	227 59 $\frac{3}{4}$	229 9 $\frac{3}{4}$	228 24	
♂ — 7.	N. 59 W.	97	18 57	18 51	224 59			226 54 $\frac{1}{4}$	
⊙ — 8.	N. 70 W.	148	18 1	18 4 $\frac{2}{3}$	222 31	223 52	225 2	224 16 $\frac{1}{2}$	
♂ — 9.	N. 79 W.	120	17 41 $\frac{1}{2}$	17 41 $\frac{1}{6}$	220 27 $\frac{1}{2}$	221 40	221 57 $\frac{3}{4}$	222 4 $\frac{1}{2}$	
♂ — 10.	N. 84 W.	111	17 30	17 22 $\frac{1}{4}$	218 31 $\frac{1}{2}$	219 35	220 2 $\frac{1}{2}$	219 59 $\frac{1}{2}$	
	Resolution Island.			17 23 $\frac{1}{4}$				218 15	
♂ — 11.	N. 86 W.	112	17 15	17 17 $\frac{2}{3}$	216 34 $\frac{1}{2}$	217 34	218 1 $\frac{1}{2}$	217 58 $\frac{1}{2}$	
	Furieux's Island.			17 11				216 53 $\frac{1}{3}$	
♂ — 12.	N. 88 W.	91	17 18 $\frac{1}{2}$	17 11	214 59 $\frac{1}{2}$	215 58	215 58	216 22 $\frac{1}{2}$	
	Adventure Island.			17 6 $\frac{1}{3}$				215 42 $\frac{1}{4}$	
♀ — 13.	S. 87 W.	75	17 15	17 16 $\frac{1}{4}$	213 41 $\frac{1}{2}$	214 41	214 41	215 4	
	Chain Island.			17 25				214 29 $\frac{7}{8}$	
♂ — 14.	S. 89 W.	99	17 18	17 15	211 57 $\frac{1}{2}$	212 53	212 55	213 18	
	Miatea, or Osnaburg.			17 52 $\frac{1}{3}$				211 54 $\frac{1}{8}$	
⊙ — 15.	S. 75 W.	96	17 40	17 46 $\frac{1}{3}$	210 22 $\frac{1}{2}$	211 14 $\frac{2}{3}$	211 38 $\frac{1}{2}$	211 39 $\frac{2}{3}$	
♂ — 16.	N. 87 W.	40	17 44	17 44 $\frac{1}{2}$	209 41 $\frac{1}{2}$			210 58	
	Oaitipeha Bay.			17 46 $\frac{1}{2}$				210 46 $\frac{3}{5}$	
♂ — 24.				17 42				210 47 $\frac{1}{2}$	
♀ — 25.				17 28 $\frac{1}{2}$				210 28 $\frac{1}{4}$	
	Point Venus.			17 29 $\frac{1}{4}$				210 25 $\frac{1}{6}$	
♂ Sept. 2.	Owharre Bay, S. part.			16 51 $\frac{1}{2}$				208 52 $\frac{2}{3}$	
♂ — 7.	Ohamaneno Bay.			16 50 $\frac{2}{3}$				208 20 $\frac{1}{3}$	

ON BOARD THE RESOLUTION.

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1773.	Course.	Distance. Miles.	Latitude South		Longitude East			Corrected.	Swell sets.
			By Account.	By Observation.	By Account.	By Watch K.	By Observation.		
Sept. 17.				16 51 $\frac{1}{2}$				208 0	
18.	S. 71 W.	75	17 16	17 17	206 59	206 43		206 45	
19.	S. 70 W.	66	17 39 $\frac{1}{2}$	17 40	205 54	205 38 $\frac{1}{2}$		205 42 $\frac{1}{2}$	
20.	S. 69 W.	65	18 3 $\frac{1}{2}$	18 3 $\frac{1}{2}$	204 49			204 39	
21.	S. 67 W.	51	18 23 $\frac{1}{2}$	18 22 $\frac{1}{2}$	204 0	203 44 $\frac{1}{2}$	204 10 $\frac{3}{4}$	203 52 $\frac{1}{4}$	
22.	S. 71 W.	51	18 39 $\frac{1}{2}$	18 41	203 9	202 46 $\frac{3}{4}$	203 12 $\frac{3}{4}$	202 56 $\frac{3}{4}$	
23.	S. 70 W.	80 $\frac{1}{2}$	19 08 $\frac{1}{2}$	19 8 $\frac{1}{2}$	201 49	201 12 $\frac{1}{2}$	201 38 $\frac{1}{2}$	201 24 $\frac{1}{2}$	
	Hervey's Islands.			19 17				201 12	
24.	S. 72 W.	71	19 29 $\frac{1}{2}$	19 28 $\frac{1}{2}$	200 41 $\frac{1}{2}$	199 33	199 54 $\frac{1}{2}$	199 47	
25.	S. 76 W.	101	19 53 $\frac{1}{2}$	19 51 $\frac{1}{2}$	198 56	197 36 $\frac{1}{2}$	198 18 $\frac{3}{4}$	197 52 $\frac{1}{2}$	
26.	S. 73 W.	109	20 23 $\frac{1}{2}$	20 25 $\frac{1}{2}$	197 5	195 33 $\frac{1}{2}$	196 16	195 51 $\frac{1}{2}$	
27.	S. 79 W.	120	20 46	20 40	195 1	193 45	194 27 $\frac{1}{2}$	194 5	
28.	S. 81 W.	136	21 1	21 3 $\frac{1}{2}$	192 34	191 5	191 47 $\frac{1}{2}$	191 27	
29.	S. 76 W.	111	21 30 $\frac{1}{2}$	21 30 $\frac{1}{2}$	190 39	189 42 $\frac{7}{8}$	190 30	190 6 $\frac{7}{8}$	
30.	N. 82 W.	153	21 8 $\frac{1}{2}$	21 11 $\frac{1}{2}$	188 1	187 25 $\frac{1}{4}$	188 12 $\frac{3}{4}$	187 51 $\frac{1}{4}$	
Oct. 1.	S. 83 W.	87	21 21 $\frac{1}{2}$	21 21 $\frac{7}{8}$	186 29	185 47	186 34 $\frac{1}{2}$	186 15	
	English Road, Eaoowe.			21 20 $\frac{1}{2}$				185 26	
	Van Diemen's Road, } Tongatabu.			21 4 $\frac{1}{2}$				185 3 $\frac{1}{2}$	
8.	S. 18 W.	61	22 3 $\frac{1}{2}$	22 4 $\frac{1}{2}$	184 44	184 8 $\frac{1}{2}$	184 41 $\frac{3}{8}$	184 40	
9.	S. 50 E.	40	22 29 $\frac{1}{2}$	22 28	185 17	184 51 $\frac{1}{2}$	185 24 $\frac{3}{4}$	185 22 $\frac{3}{4}$	
10.	S. 74 W.	61	22 44 $\frac{1}{2}$	22 45 $\frac{1}{2}$	184 13	183 29 $\frac{1}{4}$	183 59	184 0	
	Pylestaart Island.			22 23 $\frac{1}{2}$				184 12	
11.	S. 42 W.	88	23 50 $\frac{1}{2}$	23 49 $\frac{1}{2}$	183 8	182 10 $\frac{1}{2}$	182 21	182 40 $\frac{1}{2}$	
12.	S. 19 W.	110	25 34	25 36 $\frac{1}{2}$	182 28	181 16	181 44 $\frac{1}{2}$	181 45 $\frac{1}{2}$	
13.	S. 13 W.	100	27 13 $\frac{1}{2}$	27 13 $\frac{1}{2}$	182 3	180 25 $\frac{3}{4}$	180 54 $\frac{1}{4}$	180 54 $\frac{3}{4}$	
14.	S. 12 W.	97	28 47 $\frac{1}{2}$	28 46	181 40	179 45 $\frac{1}{4}$	180 13 $\frac{3}{4}$	180 13 $\frac{1}{4}$	
15.	S. 9 W.	93	30 19	30 16	181 24	179 30 $\frac{1}{2}$	179 59	179 58 $\frac{1}{2}$	
16.	S. 8 W.	89	31 41 $\frac{1}{2}$	31 41 $\frac{1}{2}$	181 10	179 27 $\frac{1}{4}$	179 55 $\frac{1}{4}$	179 55 $\frac{1}{2}$	
17.	S. 1 $\frac{1}{2}$ E.	63	32 42 $\frac{1}{2}$	32 41 $\frac{3}{4}$	181 11 $\frac{1}{2}$	179 26 $\frac{1}{2}$	179 55	179 54	
18.	S. 11 E.	83	34 3 $\frac{1}{2}$	33 46 $\frac{3}{4}$	181 27	179 48 $\frac{1}{2}$	180 17	180 15 $\frac{1}{2}$	
19.	S. 7 E.	130	35 57	35 58	181 46	179 47 $\frac{1}{2}$	180 16	180 14	
20.	S. 14 W.	115	37 49 $\frac{1}{2}$	37 47 $\frac{3}{4}$	181 11 $\frac{1}{2}$	179 33 $\frac{3}{8}$	179 46 $\frac{1}{2}$	179 59 $\frac{5}{8}$	
21.	S. 28 W.	88	38 59 $\frac{1}{2}$	39 6	180 12 $\frac{1}{2}$	178 29 $\frac{3}{4}$	178 30 $\frac{1}{2}$	178 55 $\frac{3}{4}$	
	The Shambles off Table-Head.			39 20				178 20 $\frac{3}{4}$	
	Portland.			39 25				178 12	
22.	S. 50 W.	109	40 15 $\frac{1}{2}$	40 14	178 23 $\frac{1}{2}$	176 45 $\frac{1}{2}$	176 46 $\frac{1}{2}$	177 11	
	Cape Turnagain.			40 28				176 56	
23.	S. 64 W.	33	40 28 $\frac{1}{2}$	40 28 $\frac{1}{2}$	177 44	176 36	176 35 $\frac{3}{4}$	177 2	
24.	S. 26 W.	78	41 38 $\frac{1}{2}$	41 39	176 58 $\frac{1}{2}$	176 12 $\frac{1}{2}$	176 12 $\frac{1}{4}$	176 38 $\frac{1}{2}$	
25.	S. 38 W.	55	42 21 $\frac{1}{2}$	42 23	176 12 $\frac{1}{2}$			175 54	
26.	S. 65 W.	15	42 29	42 27	175 59 $\frac{1}{2}$	175 16 $\frac{3}{4}$	175 16 $\frac{1}{2}$	175 42 $\frac{3}{4}$	
27.	N. 10 W.	52	41 36	41 35 $\frac{1}{2}$	175 47 $\frac{1}{2}$	175 25 $\frac{1}{2}$	175 25	175 51 $\frac{1}{2}$	
28.	S. 13 W.	43	42 17	42 16 $\frac{1}{2}$	175 34 $\frac{3}{4}$	175 16 $\frac{1}{4}$	175 16	176 42 $\frac{1}{2}$	
29.	N. 24 E.	40	41 39	41 45 $\frac{1}{2}$	175 52 $\frac{3}{4}$	175 46 $\frac{3}{4}$	175 46 $\frac{1}{2}$	176 12 $\frac{3}{4}$	

1773.	Course.	Distance.	Latitude South		Longitude East			Corrected.	Swell sets.
			By Account.	By Observation.	By Account.	By Watch K.	By Observation.		
		Miles.							
h Oct. 30.	S. 64 W.	73	42 17	42 13 $\frac{1}{2}$	174 24 $\frac{1}{2}$			174 55	
o — 31.	S. 58 E.	19	42 23 $\frac{1}{2}$	42 19	174 46 $\frac{1}{2}$			175 26 $\frac{3}{4}$	
D Nov. 1.	N. 54 W.	48	41 51	41 51	173 55 $\frac{1}{2}$			174 45	
h — 2.								174 54	
Queen Charlotte's Sound.			41	51 $\frac{9}{10}$				174 18 $\frac{7}{10}$	
h — 27.	S. 14 E.	107	43 26 $\frac{1}{2}$	43 26 $\frac{1}{2}$	175 24	175 55 $\frac{1}{2}$		175 56 $\frac{3}{4}$	N. E.
o — 28.	S. 20 E.	56	44 19	44 19	175 50 $\frac{1}{2}$	176 32 $\frac{1}{2}$		176 34 $\frac{1}{2}$	E. N. E.
D — 29.	S. 14 E.	15	44 35 $\frac{1}{2}$	44 36 $\frac{1}{2}$	175 56 $\frac{1}{2}$	176 57 $\frac{1}{2}$		176 0	N. E.
h — 30.	S. 45 E.	107	45 51 $\frac{1}{2}$	45 49 $\frac{1}{2}$	177 43 $\frac{1}{2}$	178 23 $\frac{1}{2}$		178 28 $\frac{1}{2}$	N. E.
h Dec. 1.	S. 38 E.	93	47 2 $\frac{1}{2}$	47 4 $\frac{1}{2}$	179 6 $\frac{1}{2}$	179 27		179 33 $\frac{1}{2}$	N. E.
u — 2.	S. 35 E.	93	48 19	48 21 $\frac{7}{8}$	180 28			180 56	N. E.
h — 3.	S. 27 E.	39	48 56 $\frac{1}{2}$	48 56 $\frac{1}{2}$	180 54			181 23	N. E.
h — 4.	S. 17 W.	68	50 1	50 1	180 23 $\frac{1}{2}$			180 53 $\frac{1}{2}$	N. E.
o — 5.	S. 70 W.	44	50 16	50 14 $\frac{1}{2}$	179 19 $\frac{1}{2}$	179 38 $\frac{3}{4}$	180 4	179 50 $\frac{2}{3}$	N. E.
D — 6.	S. 6 W.	31	50 45	50 54 $\frac{1}{2}$	179 14 $\frac{1}{2}$	179 33 $\frac{1}{2}$	179 58 $\frac{1}{2}$	179 46 $\frac{1}{2}$	N. E.
About eight in the evening, passed directly over the antipodes to London.									
h — 7.	S. 9 E.	131	53 6 $\frac{1}{2}$	53 7 $\frac{1}{2}$	179 48 $\frac{1}{2}$	180 18	180 43 $\frac{1}{2}$	180 33	N. E.
h — 8.	S. 6 E.	160	55 47	55 39	180 20 $\frac{1}{2}$	181 26	181 54 $\frac{1}{2}$	181 42 $\frac{1}{2}$	N. E.
u — 9.	S. 6 E.	126	57 45	58 2	180 44 $\frac{1}{2}$	182 4 $\frac{1}{2}$	182 21 $\frac{3}{4}$	182 22 $\frac{1}{2}$	N. E.
h — 10.	S. 43 E.	93	59 9 $\frac{1}{2}$	59 4 $\frac{1}{2}$	182 44 $\frac{1}{2}$			184 56 $\frac{1}{2}$	N. E.
h — 11.	S. 27 E.	116	60 54	60 44 $\frac{3}{4}$	184 15	186 53 $\frac{3}{4}$	187 10 $\frac{3}{4}$	187 14 $\frac{1}{2}$	N. E.
o — 12.	S. 30 E.	143	62 48 $\frac{1}{2}$	62 46 $\frac{1}{2}$	186 44	189 28 $\frac{3}{4}$	189 45 $\frac{3}{4}$	189 51	N. E.
D — 13.	S. 52 E.	92	63 42 $\frac{3}{4}$	63 39 $\frac{1}{2}$	189 29			193 19	N. E.
h — 14.	S. 52 E.	129	65 2 $\frac{1}{2}$	64 55	192 14	196 37 $\frac{1}{2}$	196 54 $\frac{1}{2}$	197 3	N. E.
h — 15.	S. 60 E.	100	65 46	65 42	195 45			200 38	N. E.
u — 16.	N. 43 E.	28	64 24 $\frac{1}{2}$	64 16:	198 7			203 4	
h — 17.	S. 66 E.	51	64 36	64 35	199 57	204 30	204 47	204 58	
h — 18.	N. 83 E.	87	64 25 $\frac{1}{2}$	64 27	203 12			208 27	
o — 19.	S. 75 E.	73	64 44 $\frac{1}{2}$	64 47 $\frac{3}{4}$	205 59	211 0	210 27	211 27 $\frac{1}{2}$	
D — 20.	S. 23 E.	75	65 56	65 58	207 10 $\frac{1}{2}$	211 47 $\frac{1}{8}$	211 14 $\frac{5}{8}$	212 14 $\frac{5}{8}$	
h — 21.	S. 34 E.	60	66 47	66 48:	208 34 $\frac{1}{2}$			213 54 $\frac{1}{2}$	
h — 22.	S. 69 E.	104	67 25	67 26 $\frac{1}{4}$	212 50 $\frac{1}{2}$			218 26 $\frac{1}{2}$	
u — 23.	N. 83 E.	93	67 15 $\frac{1}{2}$	67 12 $\frac{1}{4}$	216 52 $\frac{1}{2}$	222 19	221 46	222 45	
h — 24.	S. 58 $\frac{1}{2}$ W.	13	67 18 $\frac{1}{2}$	67 17	216 27 $\frac{3}{4}$	222 41 $\frac{1}{2}$	222 15 $\frac{1}{2}$	223 7	
h — 25.	N. 49 E.	83	66 24	66 21 $\frac{1}{2}$	219 9 $\frac{1}{4}$			225 9 $\frac{1}{4}$	
o — 26.	N. 56 E.	14	66 13 $\frac{1}{2}$	66 14 $\frac{1}{2}$	219 39	225 54 $\frac{1}{4}$	225 28 $\frac{1}{4}$	226 19 $\frac{1}{4}$	
D — 27.	N. 30 E.	25	65 53	65 53 $\frac{1}{4}$	220 9	226 38 $\frac{3}{8}$	226 12 $\frac{3}{8}$	227 3	
h — 28.	N. 9 W.	92	64 23	64 18	219 47			226 19	
h — 29.	N. $\frac{1}{2}$ E.	111	62 32 $\frac{2}{3}$	62 23	220 13	225 55	225 29	226 19	N.
u — 30.	N. 30 W.	84 $\frac{1}{2}$	61 19 $\frac{2}{3}$	61 5	218 49			225 22	
h — 31.	N. 11 W.	83	59 59	59 40	218 11	224 47 $\frac{3}{4}$	224 21 $\frac{3}{4}$	225 11	N. E.
1774.									
h Jan. 1.	N. 24 W.	30	59 13	59 11 $\frac{1}{2}$	217 46	223 47 $\frac{3}{4}$	223 21 $\frac{1}{4}$	224 10 $\frac{3}{4}$	
o — 2.	N. 22 W.	71	58 5	57 58	216 51	222 54	222 28	223 16 $\frac{3}{4}$	
D — 3.	N. 50 $\frac{1}{2}$ W.	125	56 38	56 46 $\frac{1}{4}$	214 11	220 25 $\frac{1}{2}$	219 59 $\frac{1}{2}$	220 48	
h — 4.	N. 16 $\frac{1}{2}$ E.	106	55 7	54 55 $\frac{1}{4}$	215 8			221 22 $\frac{1}{2}$	E.

ON BOARD THE RESOLUTION.

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1774.		Course.	Distance.	Latitude South		Longitude East				Swell sets.
				By Ac-	By Obser-	By Ac-	By Watch	By Obser-	Corrected.	
			Miles.	count.	vation.	count.	K.	vation.		
8	Jan.	5. N. 37 E.	94	53 40 $\frac{1}{2}$	53 43 $\frac{3}{4}$	216 41	222 11 $\frac{1}{2}$	221 45 $\frac{1}{2}$	222 33	E.
4	—	6. N. 29 E.	89	52 25	51 59 $\frac{1}{4}$	218 17	224 24	225 0 $\frac{1}{2}$	224 45 $\frac{1}{2}$	E.
2	—	7. N. 42 E.	113	50 35	50 36 $\frac{1}{2}$	220 21	226 35 $\frac{1}{4}$	226 55 $\frac{1}{4}$	226 56 $\frac{1}{4}$	E.
h	—	8. N. 42 E.	111	49 14	49 7 $\frac{1}{2}$	222 25	228 52 $\frac{1}{2}$	228 56 $\frac{1}{4}$	229 13 $\frac{1}{2}$	E.
o	—	9. N. 74 E.	161	48 23 $\frac{1}{2}$	48 17	226 42	232 44 $\frac{1}{4}$	233 13 $\frac{1}{4}$	233 5	E.
D	—	10. N. 84 $\frac{1}{2}$ E.	97	48 7 $\frac{1}{2}$	48 7 $\frac{1}{2}$	229 6	235 2	235 30 $\frac{1}{2}$	235 22	
8	—	11. N. 42 E.	111	47 52 $\frac{1}{2}$	47 51 $\frac{1}{2}$	231 47	237 32 $\frac{1}{2}$	238 0 $\frac{1}{2}$	237 52 $\frac{1}{2}$	
8	—	12. S. 45 E.	145	49 34	49 34	234 22	240 3 $\frac{1}{4}$	240 32 $\frac{1}{4}$	240 23 $\frac{1}{2}$	
4	—	13. S. 21 E.	159	52 3	52 1 $\frac{1}{2}$	235 52			241 52 $\frac{1}{2}$	
2	—	14. S. 24 W.	125	53 56	53 55 $\frac{1}{4}$	234 28	240 8 $\frac{1}{2}$	240 37	240 27 $\frac{1}{2}$	
h	—	15. S. 28 W.	154	56 11	56 5	232 22			238 1	S. E.
o	—	16. S. 74 E.	89		56 18 $\frac{1}{2}$	234 50	240 27	240 52 $\frac{1}{2}$	240 46 $\frac{1}{2}$	
D	—	17. S. 16 E.	147	58 39	58 34	235 57	241 37 $\frac{3}{8}$	242 3 $\frac{3}{8}$	241 57 $\frac{3}{8}$	
8	—	18. S. 15 E.	147	60 55 $\frac{1}{2}$	60 54 $\frac{1}{2}$	237 17	242 59 $\frac{1}{2}$	243 0 $\frac{1}{2}$	243 19 $\frac{1}{2}$	
8	—	19. S. 7 E.	57	61 52	61 50	237 32			243 28 $\frac{1}{2}$	E. S. E.
4	—	20. S. 21 E.	49	62 37	62 34 $\frac{1}{2}$	238 9	243 38 $\frac{1}{2}$	243 43 $\frac{1}{2}$	243 59 $\frac{1}{2}$	S. E.
2	—	21. N. 6 E.	7	62 27 $\frac{1}{2}$	62 26 $\frac{1}{4}$	238 11	243 25 $\frac{1}{2}$	243 30 $\frac{1}{2}$	243 46 $\frac{1}{2}$	
h	—	22. N. 77 E.	116	61 59	61 56	242 18			247 34 $\frac{1}{2}$	
o	—	23. S. 81 E.	80	62 12	62 22	245 0	249 35 $\frac{1}{2}$	249 40 $\frac{3}{4}$	249 57 $\frac{1}{2}$	N. N. E.
D	—	24. S. 43 $\frac{1}{2}$ E.	104	63 37 $\frac{1}{2}$	63 37	247 37 $\frac{1}{2}$			252 12	
8	—	25. S. b. W. $\frac{1}{4}$ W.	110 $\frac{1}{2}$	65 25	65 24 $\frac{3}{8}$	246 35	250 25	250 30	250 47 $\frac{3}{4}$	
8	—	26. S. 2 W.	63	66 28 $\frac{1}{2}$	66 35 $\frac{1}{2}$	246 29	250 17 $\frac{1}{4}$	250 22 $\frac{1}{2}$	250 40 $\frac{1}{4}$	S. W.
4	—	27. S. 12 E.	79	67 53	67 51 $\frac{1}{2}$	247 11			251 30	S. W.
2	—	28. S. 2 E.	100	69 31	69 30 $\frac{1}{2}$	247 20 $\frac{1}{2}$			251 47 $\frac{1}{2}$	
h	—	29. S. 34 E.	34	69 59 $\frac{1}{2}$	69 58 $\frac{1}{2}$	248 14	252 24	252 29	252 48	
		Tacked from the ice.			71 7 $\frac{1}{2}$				253 1 $\frac{1}{4}$	
o	—	30. S. 17 E.	53	70 45	70 46	248 54			253 29	
D	—	31. N. 5 E.	95	69 11	69 13	249 18			253 53	
8	Feb.	1. N. 21 E.	74	68 3	68 1	250 34	254 43 $\frac{1}{2}$	254 48 $\frac{1}{2}$	255 10 $\frac{1}{2}$	S. W.
8	—	2. N. 33 E.	62	67 9	67 7 $\frac{1}{2}$	252 5			256 37	
4	—	3. N. 50 E.	65	66 25 $\frac{1}{2}$	66 25	254 9	258 26	258 31	258 36	
2	—	4. N. 32 E.	44	65 47 $\frac{1}{2}$	65 41 $\frac{1}{2}$	255 15	259 47 $\frac{1}{2}$	260 11 $\frac{3}{8}$	260 18 $\frac{3}{8}$	
h	—	5. N. 5 $\frac{1}{2}$ W.	99	64 4 $\frac{1}{4}$	64 5	254 53	259 36	260 0 $\frac{1}{4}$	260 9	S.
o	—	6. N. 42 E.	17	63 52	63 53 $\frac{3}{8}$	255 14			261 11 $\frac{1}{2}$	
D	—	7. N. 2 E.	157 $\frac{1}{2}$	61 17	61 5 $\frac{1}{4}$	255 27	261 30	261 54 $\frac{1}{2}$	262 6	
8	—	8. North.	177	58 8 $\frac{1}{4}$	58 4	255 27			262 29	
8	—	9. N. $\frac{1}{2}$ W.	165	55 41 $\frac{1}{4}$	55 42	255 1			262 26	
4	—	10. N. $\frac{1}{2}$ E.	127	53 34	53 36 $\frac{3}{4}$	255 5	262 14	262 38 $\frac{1}{2}$	262 54 $\frac{1}{2}$	
2	—	11. N. 31 E.	134	51 42 $\frac{1}{2}$	51 37 $\frac{1}{2}$	256 59	263 52	264 16 $\frac{1}{4}$	264 34	
h	—	12. N. $\frac{1}{2}$ E.	81	50 16 $\frac{1}{2}$	50 15	257 6	263 54 $\frac{1}{2}$	264 19	264 38 $\frac{1}{4}$	
o	—	13. West.	32	50 16 $\frac{1}{2}$	50 12 $\frac{1}{4}$	256 34	263 15 $\frac{1}{2}$	263 39 $\frac{1}{2}$	264 0 $\frac{1}{2}$	
D	—	14. N. 13 E.	43	49 32	49 29	256 49	263 21 $\frac{1}{2}$	263 46	264 8 $\frac{1}{2}$	N. E.
8	—	15. N. 33 W.	36	49 2	48 55	256 21	262 36	263 0 $\frac{1}{2}$	263 24	
8	—	16. N. 44 $\frac{1}{2}$ E.	100	47 42	47 55	258 7			265 3	
4	—	17. N. 28 E.	94	46 22	46 17 $\frac{1}{4}$	259 16	265 18 $\frac{1}{2}$	265 42 $\frac{1}{2}$	266 9 $\frac{1}{2}$	
2	—	18. N. 3 W.	123	44 15	44 10 $\frac{1}{4}$	259 7	265 13 $\frac{1}{2}$	266 1 $\frac{1}{2}$	266 5 $\frac{1}{2}$	

ASTRONOMICAL OBSERVATIONS

1774.	Course.	Distance.	Latitude South		Longitude East				Swell sets.
			By Ac- count.	By Obser- vation.	By Ac- count.	By Watch K.	By Obser- vation.	Corrected.	
h Feb. 19.	N. 22 W.	137	42 3	42 5½	257 53	264 3½	264 7½	264 57½	N. E.
o ——— 20.	N. 16½ E.	124	40 7½	39 59½	258 43	264 53⅞	264 54⅞	265 49⅞	
D ——— 21.	N. 19 E.	130	37 56	37 53¾	259 38	265 26	266 17½	266 23	
h ——— 22.	N. 22 W.	109	36 13	36 10½	258 48	264 38⅓	265 29⅓	265 36⅓	
h ——— 23.	S. 71 W.	107	36 45	36 41½	256 44	262 26½	263 18	263 25½	
h ——— 24.	S. 62 W.	98	37 27	37 27⅓	254 54	260 42½	262 30¾	261 42½	
h ——— 25.	S. 78 W.	124	37 52¾	37 53⅔	252 24	258 25¾	260 14	259 26¾	
h ——— 26.	N. 36 W.	92	36 40	36 39¾	251 24	257 29¼	259 17½	258 31	
o ——— 27.	N. 11 W.	101	35 0¾	34 54	250 59	256 52½	253 41	257 55¼	
D ——— 28.	N. 5 W.	101	33 14	33 9	250 48	256 37	257 44	257 40	
h March 1.	N. 8 W.	55	32 15	32 17	250 39	256 23¼	257 52¼	257 26¾	
h ——— 2.	N. 11 E.	56	31 22½	31 13⅔	250 55	256 41½	258 2¼	257 45⅓	
h ——— 3.	N. 44 E.	44	30 42⅔	30 36¼	251 31	257 22¼	258 29	258 26¾	
h ——— 4.	N. 39 E.	52	29 56	29 58⅓	252 7	258 5⅓	259 13	259 10¾	
h ——— 5.	N. 55 E.	24	29 44½	29 44½	252 29	258 21	259 12½	259 27	
o ——— 6.	N. 51 W.	36	29 21	29 21⅔	251 57	257 52	258 55¾	258 58½	
D ——— 7.	N. 40 W.	81	28 19¾	28 19¼	250 59	256 44	257 54¾	257 51	
h ——— 8.	N. 50 W.	121	27 1	27 4	249 15	254 56½	256 0¼	256 4¼	
h ——— 9.	S. 89 W.	106	27 6	27 6¼	247 16	252 59½	254 35	254 7½	
h ——— 10.	S. 89 W.	97	27 8½	27 9¼	245 28	250 57¾	252 33¼	252 6¼	
h ——— 11.	S. 88 W.	52	27 11¼	27 10⅞	244 30	249 48¼	251 23¾	250 57¾	
h ——— 12.	S. 64 W.	10	27 15¼	27 17½	244 20			250 48	
Easter Island.				27 8½				250 8¼	
h ——— 17.	N. 65 W.	48	26 47¼	26 48	243 10	248 19	249 2¼	249 33	
h ——— 18.	N. 45 W.	60	26 5	26 4¼	242 23	247 29	248 55¼	248 44	
h ——— 19.	N. 24 W.	83	24 49½	24 51¼	241 46	247 1¼	248 5¼	248 14¼	
o ——— 20.	N. 13 W.	113	23 1¼	23 1⅓	241 18	246 14	247 18	247 32	
D ——— 21.	N. 20 W.	126	21 2¾	21 3⅓	240 31	245 24½	246 24	246 42½	
h ——— 22.	N. 24 W.	111	19 21½	19 21	239 43	244 22½	245 20½	245 41½	
h ——— 23.	N. 41 W.	92	18 11	18 9½	238 37	243 2⅜	244 0⅜	244 22⅜	
h ——— 24.	N. 43 W.	78	17 13	17 6⅔	237 34	241 56⅞	242 54⅞	243 17⅞	
h ——— 25.	N. 45 W.	103	15 54	16 1½	236 18	240 39⅞	241 37⅞	242 2	
h ——— 26.	N. 45 W.	112	14 42	14 45¼	234 55	239 13¾	240 11¾	240 37¼	
o ——— 27.	N. 45 W.	122	13 19½	13 13¾	233 20	237 38¾	238 36¾	239 3¾	
D ——— 28.	N. 45 W.	123½	11 45½	11 45⅔	231 50	236 2¼	237 0¼	237 28¼	
h ——— 29.	N. 45 W.	125	10 21¾	10 20¼	230 22	234 31½	236 10¼	235 59	
h ——— 30.	N. 65 W.	121	9 29	9 22⅓	228 19	232 25¼	234 4	233 54½	
h ——— 31.	N. 88 W.	112⅓	9 18¼	9 17¼	226 25	230 16¼	232 1¼	231 47¼	
h April 1.	S. 82 W.	102	9 31¼	9 29⅔	224 43	228 21¼	229 51	229 53	
h ——— 2.	S. 89 W.	90	9 31⅓	9 28⅝	223 11	226 32½	228 24⅝	228 6	
o ——— 3.	S. 88 W.	84	9 31⅝	9 32⅓	221 46	224 49⅝	226 57¾	226 24⅞	
D ——— 4.	S. 89 W.	96	9 33½	9 32¼	220 08	223 1½	225 2½	224 38¾	
h ——— 5.	S. 89 W.	84	9 34	9 33⅓	218 43	221 21¼	223 22	223 0	
h ——— 6.	N. 80 W.	71	9 21	9 19½	217 32	220 2¼	221 57	221 42¾	
h ——— 7.	S. 54 W.	47	9 47⅓	9 47⅓	216 52	219 12½	221 16	220 54¾	
Hood's Island.				9 26				221 8	

ON BOARD THE RESOLUTION.

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1774.	Course.	Dist. Miles.	Latitude South		Longitude East			Corrected.	Swell sets.
			By Ac- count.	By Obser- vation.	By Ac- count.	By Watch K.	By Obser- vation.		
	Onateayo.			9 58				221 9	
	Ohevahoa.			9 40 $\frac{3}{8}$				220 58 $\frac{1}{8}$	
	Harbour in Ohitahoo.			9 55 $\frac{1}{2}$				220 51 $\frac{1}{2}$	
	La Magdalena.			10 25 $\frac{1}{2}$				221 11	
8 April 13	S. 37 W. 68		10 50 $\frac{1}{2}$	10 55 $\frac{1}{4}$	215 51 $\frac{1}{2}$	218 0	220 3 $\frac{1}{2}$	219 54 $\frac{1}{4}$	
4 — 14	S. 31 W. 102		12 23	12 24 $\frac{1}{4}$	214 56 $\frac{1}{2}$	217 2	219 5 $\frac{1}{2}$	218 57 $\frac{1}{2}$	
8 — 15	S. 49 W. 116		13 39 $\frac{1}{2}$	13 41 $\frac{1}{2}$	213 25 $\frac{1}{2}$	215 33 $\frac{1}{2}$	217 18 $\frac{1}{4}$	217 30 $\frac{1}{4}$	
h — 16	S. 58 W. 68		14 17	14 17 $\frac{7}{8}$	212 25 $\frac{1}{2}$	214 18 $\frac{1}{4}$	216 3 $\frac{7}{8}$	216 16 $\frac{1}{4}$	
o — 17	S. 81 W. 65		14 28	14 26 $\frac{1}{2}$	211 18 $\frac{1}{2}$	213 2 $\frac{1}{2}$	215 23	215 1 $\frac{1}{2}$	
	Isle Taoukaa.			14 30 $\frac{1}{2}$				214 50 $\frac{1}{2}$	
	The island by it.			14 38				214 39	
D — 18	S. 45 $\frac{1}{2}$ W. 35		14 54 $\frac{3}{4}$	14 56 $\frac{1}{2}$	210 53 $\frac{1}{2}$	212 29 $\frac{3}{8}$	214 24	214 30 $\frac{3}{8}$	
8 — 19	S. 46 W. 54		15 35 $\frac{1}{2}$	15 38 $\frac{1}{4}$	210 8 $\frac{1}{2}$	211 28 $\frac{3}{8}$	213 28	213 30 $\frac{3}{8}$	
	Palliser's Isles			15 38 $\frac{3}{4}$				213 29 $\frac{1}{2}$	
8 — 20	S. 59 W. 51		16 4 $\frac{1}{2}$	16 4 $\frac{1}{2}$	209 21 $\frac{1}{2}$	210 31	212 30 $\frac{3}{8}$	212 34 $\frac{1}{4}$	
4 — 21	S. 40 W. 116		17 33 $\frac{1}{2}$	17 32 $\frac{1}{2}$	208 3 $\frac{1}{2}$	208 55 $\frac{1}{2}$	210 55 $\frac{1}{2}$	211 0	
	Point Venus.			17 29 $\frac{1}{2}$				210 23 $\frac{1}{4}$	
	Owharre Bay, N. part.			16 42 $\frac{4}{5}$				208 50 $\frac{3}{5}$	
	Ohamaneno Bay			16 45 $\frac{3}{5}$				208 23 $\frac{3}{5}$	
	Bolabola.			16 32 $\frac{1}{2}$				208 8 $\frac{1}{2}$	
	Maurua.			16 25 $\frac{2}{3}$				207 27 $\frac{1}{3}$	
o June 5	S. 88 W. 54		16 46 $\frac{1}{4}$	16 48	207 28	207 19 $\frac{3}{4}$	207 10 $\frac{1}{2}$	207 27	
D — 6	S. 88 W. 79		16 50	16 49 $\frac{3}{8}$	206 5	206 2 $\frac{1}{8}$	205 52 $\frac{7}{8}$	206 0 $\frac{1}{2}$	
	Howe's Island.			16 46 $\frac{1}{2}$				205 53 $\frac{1}{2}$	
8 — 7	S. 75 W. 76		17 9 $\frac{1}{2}$	17 9 $\frac{1}{2}$	204 47	204 46	204 36 $\frac{3}{4}$	204 49	
8 — 8	S. 52 W. 40		17 33 $\frac{1}{4}$	17 32 $\frac{1}{2}$	204 14	204 6 $\frac{1}{4}$	203 57	204 11 $\frac{1}{4}$	
4 — 9	S. 85 W. 43		17 36 $\frac{1}{4}$	17 38 $\frac{3}{4}$	203 29	203 28 $\frac{3}{4}$	203 19 $\frac{1}{2}$	203 35 $\frac{3}{4}$	
8 — 10	S. 79 W. 46		17 47 $\frac{1}{2}$	17 48	202 41	202 48 $\frac{1}{2}$	202 39 $\frac{3}{4}$	202 57 $\frac{1}{2}$	
h — 11	S. 78 W. 41		17 56 $\frac{1}{4}$	17 55 $\frac{1}{4}$	201 58	202 7 $\frac{1}{8}$	201 58 $\frac{3}{4}$	202 18 $\frac{5}{8}$	
o — 12	S. 74 W. 75		18 16	18 10 $\frac{1}{8}$	200 43			200 56	
D — 13	S. 71 W. 118		18 49	18 45 $\frac{1}{2}$	198 45	198 34 $\frac{1}{4}$	198 12 $\frac{7}{8}$	198 50	
8 — 14	N. 83 W. 74		18 36 $\frac{1}{2}$	18 3 $\frac{1}{2}$	197 27	197 7	197 58 $\frac{1}{4}$	197 25	
8 — 15	N. 58 W. 13		18 29	18 27 $\frac{1}{2}$	197 15	196 59 $\frac{1}{4}$	197 58 $\frac{1}{2}$	197 20	
4 — 16	N. 71 W. 36		18 15 $\frac{1}{2}$	18 11 $\frac{1}{2}$	196 40	196 35 $\frac{7}{8}$	197 49 $\frac{1}{8}$	196 58 $\frac{1}{2}$	
	Palmerston's Island.			18 0				197 3	
8 — 17	N. 84 W. 69		18 4 $\frac{1}{2}$	18 2 $\frac{1}{4}$	195 28	195 20 $\frac{1}{8}$	196 10 $\frac{7}{8}$	195 44 $\frac{1}{2}$	
h — 18	S. 82 W. 77		18 14	18 12	194 8	193 54 $\frac{1}{2}$	194 45 $\frac{1}{4}$	194 21	
o — 19	S. 79 W. 80		18 29 $\frac{1}{2}$	18 25	192 45	192 20 $\frac{3}{8}$	192 35 $\frac{3}{4}$	192 49	
D — 20	S. 77 W. 104		18 48 $\frac{1}{2}$	18 49 $\frac{1}{4}$	90 58	190 39 $\frac{1}{8}$	190 47 $\frac{1}{2}$	191 9	
8 — 21	S. 70 W. 43		19 4	18 57 $\frac{1}{2}$	190 16	189 54	190 28 $\frac{1}{2}$	190 26	
	Savage Island.			19 2 $\frac{1}{4}$				190 29 $\frac{1}{2}$	
8 — 22	S. 59 W. 48		19 21 $\frac{1}{4}$	19 23 $\frac{1}{8}$	189 32	189 15 $\frac{1}{2}$	89 57 $\frac{1}{2}$	189 48 $\frac{1}{2}$	
4 — 23	S. 67 $\frac{1}{2}$ W. 89		19 57	19 49 $\frac{1}{2}$	188 5	187 52	188 53 $\frac{1}{2}$	188 25	
8 — 24	S. 76 W. 107		20 14 $\frac{1}{4}$	20 24 $\frac{1}{4}$	186 14	185 59	187 0 $\frac{1}{2}$	186 32	
h — 25	N. 87 W. 25		20 23 $\frac{1}{4}$	20 20	185 48	185 23 $\frac{3}{8}$	186 24 $\frac{7}{8}$	185 56 $\frac{3}{8}$	
o — 26	S. 53 W. 15		20 28	20 23 $\frac{1}{8}$	185 35	185 0 $\frac{1}{4}$	186 1 $\frac{1}{4}$	185 32 $\frac{1}{4}$	

1774.	Course.			Distance. Miles.	Latitude South		Longitude East				Swell sets.						
					By Account.	By Observation.	By Account.	By Watch K.	By Observation.	Corrected.							
	°	′	″	°	′	″	°	′	″	°		′	″				
h Feb. 19.	N.	22	W.	137	42	3	42	5 $\frac{1}{2}$	257	53	264	3 $\frac{1}{2}$	264	7 $\frac{1}{2}$	264	57 $\frac{1}{2}$	N. E.
o — 20.	N.	16 $\frac{1}{2}$	E.	124	40	7 $\frac{1}{2}$	39	59 $\frac{1}{2}$	258	43	264	53 $\frac{7}{8}$	264	54 $\frac{1}{8}$	265	49 $\frac{3}{8}$	
D — 21.	N.	19	E.	130	37	56	37	53 $\frac{3}{4}$	259	38	265	26	266	17 $\frac{1}{2}$	266	23	
δ — 22.	N.	22	W.	109	36	13	36	10 $\frac{1}{2}$	258	48	264	38 $\frac{1}{3}$	265	29 $\frac{2}{3}$	265	36 $\frac{1}{3}$	
♀ — 23.	S.	71	W.	107	36	45	36	41 $\frac{1}{2}$	256	44	262	26 $\frac{1}{2}$	263	18	263	25 $\frac{1}{2}$	
u — 24.	S.	62	W.	98	37	27	37	27 $\frac{1}{3}$	254	54	260	42 $\frac{1}{2}$	262	30 $\frac{3}{4}$	261	42 $\frac{1}{2}$	
♀ — 25.	S.	78	W.	124	37	52 $\frac{3}{4}$	37	53 $\frac{2}{3}$	252	24	258	25 $\frac{3}{4}$	260	14	259	26 $\frac{3}{4}$	
h — 26.	N.	36	W.	92	36	40	36	39 $\frac{3}{4}$	251	24	257	29 $\frac{1}{4}$	259	17 $\frac{1}{2}$	258	31	
o — 27.	N.	11	W.	101	35	0 $\frac{3}{4}$	34	54	250	59	256	52 $\frac{1}{4}$	253	41	257	55 $\frac{1}{4}$	
D — 28.	N.	5	W.	101	33	14	33	9	250	48	256	37	257	44	257	40	
δ March 1.	N.	8	W.	55	32	15	32	17	250	39	256	23 $\frac{1}{4}$	257	52 $\frac{1}{4}$	257	26 $\frac{3}{4}$	
♀ — 2.	N.	11	E.	56	31	22 $\frac{1}{2}$	31	13 $\frac{2}{3}$	250	55	256	41 $\frac{1}{2}$	258	2 $\frac{1}{4}$	257	45 $\frac{1}{2}$	
u — 3.	N.	44	E.	44	30	42 $\frac{2}{3}$	30	36 $\frac{1}{2}$	251	31	257	22 $\frac{1}{4}$	258	29	258	26 $\frac{3}{4}$	
♀ — 4.	N.	39	E.	52	29	56	29	58 $\frac{1}{3}$	252	7	258	5 $\frac{1}{3}$	259	13	259	10 $\frac{3}{4}$	
h — 5.	N.	55	E.	24	29	44 $\frac{1}{2}$	29	44 $\frac{1}{2}$	252	29	258	21	259	12 $\frac{1}{2}$	259	27	
o — 6.	N.	51	W.	36	29	21	29	21 $\frac{2}{3}$	251	57	257	52	258	55 $\frac{3}{4}$	258	58 $\frac{1}{2}$	
D — 7.	N.	40	W.	81	28	19 $\frac{3}{4}$	28	19 $\frac{3}{4}$	250	59	256	44	257	54 $\frac{3}{4}$	257	51	
δ — 8.	N.	50	W.	121	27	1	27	4	249	15	254	56 $\frac{1}{2}$	256	0 $\frac{1}{4}$	256	4 $\frac{1}{4}$	
♀ — 9.	S.	89	W.	106	27	6	27	6 $\frac{1}{4}$	247	16	252	59 $\frac{1}{2}$	254	35	254	7 $\frac{1}{2}$	
u — 10.	S.	89	W.	97	27	8 $\frac{1}{2}$	27	9 $\frac{1}{4}$	245	28	250	57 $\frac{3}{4}$	252	33 $\frac{1}{4}$	252	6 $\frac{1}{4}$	
♀ — 11.	S.	88	W.	52	27	11 $\frac{1}{4}$	27	10 $\frac{7}{8}$	244	30	249	48 $\frac{1}{4}$	251	23 $\frac{3}{4}$	250	57 $\frac{3}{4}$	
h — 12.	S.	64	W.	10	27	15 $\frac{1}{4}$	27	17 $\frac{1}{2}$	244	20					250	48	
Easter Island.							27	8 $\frac{1}{2}$							250	8 $\frac{1}{4}$	
u — 17.	N.	65	W.	48	26	47 $\frac{3}{4}$	26	48	243	10	248	19	249	2 $\frac{1}{4}$	249	33	
♀ — 18.	N.	45	W.	60	26	5	26	4 $\frac{1}{4}$	242	23	247	29	248	55 $\frac{1}{4}$	248	44	
h — 19.	N.	24	W.	83	24	49 $\frac{1}{2}$	24	51 $\frac{1}{4}$	241	46	247	1 $\frac{1}{4}$	248	5 $\frac{1}{4}$	248	14 $\frac{1}{4}$	
o — 20.	N.	13	W.	113	23	1 $\frac{1}{4}$	23	1 $\frac{1}{3}$	241	18	246	14	247	18	247	32	
D — 21.	N.	20	W.	126	21	2 $\frac{3}{4}$	21	3 $\frac{1}{3}$	240	31	245	24 $\frac{1}{2}$	246	24	246	42 $\frac{1}{2}$	
δ — 22.	N.	24	W.	111	19	21 $\frac{1}{2}$	19	21	239	43	244	22 $\frac{1}{2}$	245	20 $\frac{1}{2}$	245	41 $\frac{1}{2}$	
♀ — 23.	N.	41	W.	92	18	11	18	9 $\frac{1}{2}$	238	37	243	2 $\frac{3}{8}$	244	0 $\frac{3}{8}$	244	22 $\frac{3}{8}$	
u — 24.	N.	43	W.	78	17	13	17	6 $\frac{2}{3}$	237	34	241	56 $\frac{7}{8}$	242	54 $\frac{7}{8}$	243	17 $\frac{7}{8}$	
♀ — 25.	N.	45	W.	103	15	54	16	1 $\frac{1}{2}$	236	18	240	39 $\frac{7}{8}$	241	37 $\frac{7}{8}$	242	2	
h — 26.	N.	45	W.	112	14	42	14	45 $\frac{3}{4}$	234	55	239	13 $\frac{3}{4}$	240	11 $\frac{3}{4}$	240	37 $\frac{1}{4}$	
o — 27.	N.	45	W.	122	13	19 $\frac{1}{2}$	13	13 $\frac{3}{4}$	233	20	237	38 $\frac{3}{4}$	238	36 $\frac{3}{4}$	239	3 $\frac{1}{4}$	
D — 28.	N.	45	W.	123 $\frac{1}{2}$	11	45 $\frac{1}{2}$	11	45 $\frac{2}{3}$	231	50	236	2 $\frac{1}{4}$	237	0 $\frac{1}{4}$	237	28 $\frac{1}{4}$	
δ — 29.	N.	45	W.	125	10	21 $\frac{3}{4}$	10	20 $\frac{1}{4}$	230	22	234	31 $\frac{1}{2}$	236	10 $\frac{1}{4}$	235	59	
♀ — 30.	N.	65	W.	121	9	29	9	22 $\frac{1}{3}$	228	19	232	25 $\frac{1}{4}$	234	4	233	54 $\frac{1}{2}$	
u — 31.	N.	88	W.	112 $\frac{1}{3}$	9	18 $\frac{1}{4}$	9	17 $\frac{1}{4}$	226	25	230	16 $\frac{1}{4}$	232	1 $\frac{1}{4}$	231	47 $\frac{1}{4}$	
♀ April 1.	S.	82	W.	102	9	31 $\frac{1}{4}$	9	29 $\frac{2}{3}$	224	43	228	21 $\frac{1}{4}$	229	51	229	53	
h — 2.	S.	89	W.	90	9	31 $\frac{1}{3}$	9	28 $\frac{5}{8}$	223	11	226	32 $\frac{1}{2}$	228	24 $\frac{5}{8}$	228	6	
o — 3.	S.	88	W.	84	9	31 $\frac{5}{8}$	9	32 $\frac{1}{3}$	221	46	224	49 $\frac{5}{8}$	226	57 $\frac{3}{4}$	226	24 $\frac{7}{8}$	
D — 4.	S.	89	W.	96	9	33 $\frac{1}{2}$	9	32 $\frac{1}{4}$	220	08	223	1 $\frac{1}{4}$	225	2 $\frac{1}{3}$	224	38 $\frac{3}{4}$	
δ — 5.	S.	89	W.	84	9	34	9	33 $\frac{1}{3}$	218	43	221	21 $\frac{1}{4}$	223	22	223	0	
♀ — 6.	N.	80	W.	71	9	21	9	19 $\frac{1}{2}$	217	32	220	2 $\frac{1}{4}$	221	57	221	42 $\frac{3}{4}$	
u — 7.	S.	54	W.	47	9	47 $\frac{1}{3}$	9	47 $\frac{1}{3}$	216	52	219	12 $\frac{1}{2}$	221	16	220	54 $\frac{5}{4}$	
Hood's Island.							9	26							221	8	

ON BOARD THE RESOLUTION.

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1774.	Course.	Dist. Miles.	Latitude South		Longitude East				Swell sets.
			By Ac- count.	By Obser- vation.	By Ac- count.	By Watch K.	By Obser- vation.	Corrected.	
				9 58				221 9	
				9 40 ⁵ / ₈				220 58 ¹ / ₈	
				9 55 ¹ / ₂				220 51 ¹ / ₃	
				10 25 ¹ / ₂				221 11	
8 April 13	S. 37 W.	68	10 50 ¹ / ₂	10 55 ¹ / ₄	215 51 ¹ / ₂	218 0	220 3 ¹ / ₂	219 54 ¹ / ₄	
4 — 14	S. 31 W.	102	12 23	12 24 ¹ / ₄	214 56 ¹ / ₂	217 2	219 5 ¹ / ₂	218 57 ¹ / ₂	
8 — 15	S. 49 W.	116	13 39 ¹ / ₂	13 41 ¹ / ₃	213 25 ¹ / ₂	215 33 ¹ / ₂	217 18 ¹ / ₄	217 30 ¹ / ₄	
h — 16	S. 58 W.	68	14 17	14 17 ⁷ / ₈	212 25 ¹ / ₂	214 18 ¹ / ₄	216 3 ⁷ / ₈	216 16 ¹ / ₄	
o — 17	S. 81 W.	65	14 28	14 26 ¹ / ₃	211 18 ¹ / ₂	213 2 ¹ / ₂	215 23	215 1 ¹ / ₄	
	Isle Taoukaa.			14 30 ¹ / ₂				214 50 ¹ / ₂	
	The island by it.			14 38				214 39	
D — 18	S. 45 ¹ / ₂ W.	35	14 54 ² / ₃	14 56 ¹ / ₃	210 53 ¹ / ₂	212 29 ¹ / ₂	214 24	214 30 ³ / ₈	
8 — 19	S. 46 W.	54	15 35 ¹ / ₃	15 38 ¹ / ₄	210 8 ¹ / ₂	211 28 ¹ / ₈	213 28	213 30 ³ / ₈	
	Pallisser's Isles			15 38 ¹ / ₄				213 29 ¹ / ₂	
8 — 20	S. 59 W.	51	16 4 ¹ / ₂	16 4 ¹ / ₂	209 21 ¹ / ₂	210 31	212 30 ³ / ₈	212 34 ¹ / ₄	
4 — 21	S. 40 W.	116	17 33 ¹ / ₂	17 32 ¹ / ₂	208 3 ¹ / ₂	208 55 ¹ / ₂	210 55 ¹ / ₃	211 0	
	Point Venus.			17 29 ¹ / ₃				210 23 ¹ / ₄	
	Owharre Bay, N. part.			16 42 ⁴ / ₃				208 50 ³ / ₃	
	Ohamaneno Bay			16 45 ³ / ₃				208 23 ¹ / ₃	
	Bolabola.			16 32 ¹ / ₂				208 8 ¹ / ₈	
	Maurua.			16 25 ² / ₃				207 27 ¹ / ₃	
o June 5	S. 88 W.	54	16 46 ¹ / ₄	16 48	207 28	207 19 ³ / ₄	207 10 ¹ / ₂	207 27	
D — 6	S. 88 W.	79	16 50	16 49 ⁵ / ₈	206 5	206 2 ¹ / ₈	205 52 ⁷ / ₈	206 0 ¹ / ₂	
	Howe's Island.			16 46 ¹ / ₂				205 53 ¹ / ₃	
8 — 7	S. 75 W.	76	17 9 ¹ / ₂	17 9 ¹ / ₂	204 47	204 46	204 36 ³ / ₄	204 49	
8 — 8	S. 52 W.	40	17 33 ¹ / ₄	17 32 ¹ / ₂	204 14	204 6 ¹ / ₄	203 57	204 11 ¹ / ₄	
4 — 9	S. 85 W.	43	17 36 ¹ / ₄	17 38 ² / ₃	203 29	203 28 ³ / ₄	203 19 ¹ / ₂	203 35 ¹ / ₄	
8 — 10	S. 79 W.	46	17 47 ¹ / ₃	17 48	202 41	202 48 ¹ / ₂	202 39 ¹ / ₄	202 57 ¹ / ₂	
h — 11	S. 78 W.	41	17 56 ¹ / ₄	17 55 ¹ / ₄	201 58	202 7 ¹ / ₈	201 58 ³ / ₄	202 18 ⁵ / ₈	
o — 12	S. 74 W.	75	18 16	18 10 ¹ / ₈	200 43			200 56	
D — 13	S. 71 W.	118	18 49	18 45 ¹ / ₃	198 45	198 34 ¹ / ₄	198 12 ⁷ / ₈	198 50	
8 — 14	N. 83 W.	74	18 36 ¹ / ₃	18 3 ¹ / ₂	197 27	197 7	197 58 ¹ / ₄	197 25	
8 — 15	N. 58 W.	13	18 29	18 27 ¹ / ₃	197 15	196 59 ¹ / ₄	197 58 ¹ / ₄	197 20	
4 — 16	N. 71 W.	36	18 15 ¹ / ₃	18 11 ¹ / ₃	196 40	196 35 ⁷ / ₈	197 49 ¹ / ₈	196 58 ¹ / ₂	
	Palmerston's Island.			18 0				197 3	
8 — 17	N. 84 W.	69	18 4 ¹ / ₃	18 2 ¹ / ₄	195 28	195 20 ¹ / ₈	196 10 ⁷ / ₈	195 44 ¹ / ₂	
h — 18	S. 82 W.	77	18 14	18 12	194 8	193 54 ¹ / ₂	194 45 ¹ / ₄	194 21	
o — 19	S. 79 W.	80	18 29 ¹ / ₂	18 25	192 45	192 20 ³ / ₈	192 35 ³ / ₄	192 49	
D — 20	S. 77 W.	104	18 48 ¹ / ₂	18 49 ¹ / ₄	90 58	190 39 ¹ / ₈	190 47 ¹ / ₂	191 9	
8 — 21	S. 70 W.	43	19 4	18 57 ¹ / ₂	190 16	189 54	190 28 ¹ / ₂	190 26	
	Savage Island.			19 2 ¹ / ₄				190 29 ¹ / ₂	
8 — 22	S. 59 W.	48	19 21 ¹ / ₄	19 23 ¹ / ₆	189 32	189 15 ¹ / ₂	89 57 ¹ / ₂	189 48 ¹ / ₂	
4 — 23	S. 67 ¹ / ₂ W.	89	19 57	19 49 ¹ / ₃	188 5	187 52	188 53 ¹ / ₂	188 25	
8 — 24	S. 76 W.	107	20 14 ¹ / ₄	20 24 ¹ / ₄	186 14	185 59	187 0 ¹ / ₂	186 32	
h — 25	N. 87 W.	25	20 23 ¹ / ₄	20 20	185 48	185 23 ³ / ₈	186 24 ⁷ / ₈	185 56 ¹ / ₈	
o — 26	S. 53 W.	15	20 28	20 23 ¹ / ₆	185 35	185 0 ¹ / ₄	186 1 ¹ / ₄	185 32 ¹ / ₄	

ON BOARD THE RESOLUTION.

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1774.	Course.	Distance. Miles.	Latitude South		Longitude East				Swell sets.
			By Account.	By Observation.	By Account.	By Watch K.	By Observation.	Corrected.	
			° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	
July 24.	S. 23 E.	26 16 48	16 48	16 32 $\frac{1}{2}$	168 27			167 59 $\frac{1}{2}$	
				16 33				167 57 $\frac{1}{4}$	
				16 30				168 28 $\frac{3}{4}$	
				16 59				168 26 $\frac{1}{4}$	
				16 53 $\frac{1}{2}$				168 37	
				16 39				168 18	
				17 4				168 35	
				17 5				168 32	
				17 8 $\frac{1}{2}$				168 28 $\frac{1}{2}$	
				16 56				168 41 $\frac{1}{4}$	
				16 52				168 42	
				16 58				168 43 $\frac{1}{4}$	
				17 1				168 42	
				17 1 $\frac{1}{2}$				168 43 $\frac{1}{2}$	
				17 3 $\frac{1}{2}$				168 43	
Aug. 1.	S. 26 E.	31 17 15 $\frac{1}{2}$	17 15 $\frac{1}{2}$	17 7 $\frac{1}{2}$	168 42	168 17 $\frac{7}{8}$	168 53 $\frac{7}{8}$	168 36	
				17 13				168 35 $\frac{1}{4}$	
				17 14 $\frac{1}{4}$				168 38 $\frac{1}{4}$	
				17 18 $\frac{1}{8}$				168 37 $\frac{1}{3}$	
				17 31				168 41	
				17 29				168 20 $\frac{1}{2}$	
				17 53				168 45 $\frac{1}{4}$	
				17 25				168 38	
				17 26				168 31 $\frac{1}{2}$	
				18 0 $\frac{1}{2}$				169 19 $\frac{1}{2}$	
				18 24 $\frac{7}{8}$				169 47 $\frac{1}{2}$	
				18 30 $\frac{1}{3}$				170 6 $\frac{1}{2}$	
				18 33 $\frac{1}{2}$				169 42 $\frac{2}{3}$	
				18 21				169 34 $\frac{2}{3}$	
				18 32 $\frac{1}{3}$				169 13 $\frac{3}{4}$	
Aug. 2.	S. 50 W.	15 18 46 $\frac{1}{2}$	18 46 $\frac{1}{2}$	18 43 $\frac{1}{2}$	169 16	168 26	169 10 $\frac{1}{2}$	169 20 $\frac{1}{2}$	
				18 41				169 26	
				18 36 $\frac{1}{2}$				169 9	
				18 56 $\frac{1}{2}$				169 28	
				18 36 $\frac{1}{2}$				169 18 $\frac{1}{2}$	
				19 16 $\frac{1}{2}$				169 21	
				19 38 $\frac{1}{2}$				169 43	
				19 32 $\frac{2}{3}$				169 44 $\frac{2}{3}$	
				19 16				169 46	
				19 31				170 21	
				20 10				170 4	
				19 24				169 46	
				19 33 $\frac{2}{3}$				170 4 $\frac{2}{3}$	
				18 19 $\frac{1}{3}$				168 47 $\frac{1}{3}$	
				16 23 $\frac{1}{6}$				167 35 $\frac{1}{3}$	

1774.	Course.	Distance. Miles.	Latitude South		Longitude East			Corrected.	Swell sets.
			By Account.	By Observation.	By Account.	By Watch K.	By Observation.		
				15 53				167 19 $\frac{1}{2}$	
				16 38				167 59	
				16 38				167 42 $\frac{1}{2}$	
				16 31				167 36 $\frac{1}{2}$	
				15 42				167 17 $\frac{1}{2}$	
Aug. 24.	N. 11 E.	70	15 16 $\frac{1}{3}$	15 23 $\frac{1}{3}$	168 11	166 46 $\frac{3}{8}$	167 57 $\frac{1}{8}$	167 32 $\frac{4}{5}$	
				14 56				167 20	
25.	N. 33 W.	39	14 50	14 55 $\frac{1}{2}$	167 49	166 19 $\frac{7}{8}$	167 30 $\frac{5}{8}$	167 2 $\frac{3}{8}$	
26.	S. 69 E.	14	15 0 $\frac{1}{2}$	15 5	168 2	166 27	166 51 $\frac{1}{2}$	167 10	
27.	N. 14 W.	24	14 42	14 39 $\frac{1}{2}$	167 55	166 11 $\frac{1}{8}$	167 3 $\frac{5}{8}$	166 54 $\frac{1}{3}$	
				14 39 $\frac{1}{2}$				166 47	
28.	S. 60 W.	24	14 51 $\frac{1}{4}$	14 50 $\frac{1}{3}$	167 34	165 55 $\frac{1}{2}$	167 13 $\frac{3}{4}$	166 38 $\frac{1}{2}$	
29.	S. 49 W.	12	14 58 $\frac{1}{3}$	14 58 $\frac{2}{3}$	167 24	165 51	166 50	166 34	
30.	S. 10 W.	17	15 15 $\frac{1}{3}$	15 19 $\frac{7}{8}$	167 20	165 54 $\frac{1}{8}$	166 16 $\frac{1}{2}$	166 37 $\frac{1}{3}$	
31.	S. 27 E.	24	15 41	15 45	167 32	166 6 $\frac{1}{3}$	166 52	166 49 $\frac{1}{4}$	
				15 40 $\frac{1}{4}$				166 57	
				15 38				167 7	
Sept. 1.	S. 35 W.	54	16 29 $\frac{1}{3}$	16 33 $\frac{2}{3}$	166 55	165 28 $\frac{1}{4}$	166 16 $\frac{7}{8}$	166 11 $\frac{1}{4}$	
2.	S. 18 W.	88	17 56	18 6 $\frac{1}{8}$	166 23	164 42 $\frac{1}{4}$	165 30 $\frac{7}{8}$	165 25 $\frac{3}{4}$	
3.	S. 17 W.	55	18 59 $\frac{1}{4}$	19 3 $\frac{1}{2}$	166 6	164 15	165 3 $\frac{1}{8}$	164 58	
4.	S. 11 W.	52	19 50 $\frac{1}{4}$	19 50 $\frac{1}{4}$	165 53	164 0 $\frac{1}{2}$	164 48 $\frac{5}{8}$	164 43 $\frac{1}{2}$	
5.	S. 10 W.	9	20 8 $\frac{1}{4}$	20 16 $\frac{3}{8}$	165 49 $\frac{1}{2}$			164 40 $\frac{1}{4}$	
				20 18 $\frac{1}{6}$				164 41 $\frac{1}{3}$	
				20 7				164 22	
				20 30				164 56	
13.	N. 23 $\frac{1}{2}$ W.	26	19 54	19 53 $\frac{1}{3}$	165 39	163 42 $\frac{1}{2}$	164 17 $\frac{1}{2}$	164 26	
14.	N. 27 W.	31	19 26	19 28 $\frac{1}{4}$	165 24	163 27	163 46 $\frac{1}{4}$	164 10 $\frac{1}{2}$	
15.	N. 11 W.	22	19 7	19 15 $\frac{1}{4}$	165 18 $\frac{1}{2}$	163 20 $\frac{1}{8}$	163 41 $\frac{3}{8}$	164 3 $\frac{1}{4}$	
16.	S. 47 E.	22	19 31	19 34 $\frac{1}{2}$	165 35 $\frac{1}{2}$	163 36 $\frac{1}{2}$	163 57 $\frac{3}{4}$	164 20 $\frac{1}{8}$	
17.	S. 49 E.	26	19 51 $\frac{1}{2}$	19 53 $\frac{1}{2}$	165 56 $\frac{1}{2}$	164 4 $\frac{1}{4}$	164 26	164 46 $\frac{3}{8}$	
18.	S. 49 E.	16	20 4 $\frac{1}{2}$	20 4	166 11 $\frac{1}{2}$			165 1	
19.	S. 51 E.	33	20 24	20 26	166 36 $\frac{1}{2}$			165 28 $\frac{1}{2}$	
20.	S. 63 E.	27	20 36 $\frac{1}{2}$	20 41	167 2	165 4 $\frac{1}{3}$	165 25 $\frac{1}{2}$	165 48	
21.	S. 78 E.	20	20 45 $\frac{1}{2}$	20 54 $\frac{1}{2}$	167 23	165 24 $\frac{1}{2}$	166 7 $\frac{1}{2}$	166 8 $\frac{5}{8}$	
22.	S. 42 E.	40	21 24 $\frac{1}{2}$	21 25 $\frac{2}{3}$	167 53	166 1 $\frac{3}{4}$	166 47	166 45 $\frac{1}{4}$	
23.	S. 34 E.	31	21 52	21 53 $\frac{1}{2}$	168 13 $\frac{1}{2}$	166 23 $\frac{1}{8}$	167 8 $\frac{3}{4}$	167 7 $\frac{1}{8}$	
				22 5				167 8	
24.	S. 54 E.	27	22 9 $\frac{1}{2}$	21 59 $\frac{1}{2}$	168 37 $\frac{1}{2}$	166 42 $\frac{1}{8}$	167 50 $\frac{7}{8}$	167 26 $\frac{1}{8}$	
				22 15				167 12 $\frac{3}{4}$	
25.	S. 11 W.	17	22 16 $\frac{1}{2}$	22 10 $\frac{1}{4}$	168 33 $\frac{1}{2}$	166 38 $\frac{1}{8}$	167 53 $\frac{3}{8}$	167 22 $\frac{1}{8}$	
26.	S. 54 E.	18	22 21	22 16	168 48 $\frac{1}{2}$	166 50 $\frac{3}{4}$	168 6	167 35	
27.	S. 67 E.	28	22 27	22 32 $\frac{1}{3}$	169 16 $\frac{1}{2}$	167 8 $\frac{5}{8}$	168 23 $\frac{7}{8}$	167 52 $\frac{7}{8}$	
28.	S. 59 W.	22	22 43 $\frac{1}{3}$	22 44 $\frac{2}{3}$	168 54 $\frac{1}{2}$	166 45 $\frac{1}{2}$	168 0 $\frac{3}{4}$	167 29 $\frac{3}{4}$	
				22 38				167 38	
29.	S. 29 W.	20	22 27	22 26 $\frac{2}{3}$	168 42 $\frac{1}{2}$	166 30 $\frac{7}{8}$	167 28 $\frac{1}{8}$	167 15 $\frac{3}{8}$	
				22 26 $\frac{2}{3}$				167 16 $\frac{3}{4}$	
30.	S. 18 E.	7	22 33 $\frac{2}{3}$	22 34 $\frac{1}{3}$	168 45	166 34 $\frac{1}{2}$	167 42 $\frac{1}{4}$	167 18	

1774.	Course.	Distance.	Latitude South		Longitude East				Ship rolls.	Swell sets.
			By Account.	By Observation.	By Account.	By Watch K.	By Observation.	Corrected.		
		Miles.								
h Oct. 1.	S. 66 E.	58	22 58	22 56 $\frac{2}{3}$	169 43	167 33 $\frac{1}{2}$	168 30 $\frac{3}{4}$	168 18 $\frac{1}{2}$		
o — 2.	S. 26 E.	52	23 19 $\frac{1}{3}$	23 19 $\frac{2}{3}$	170 33	168 47 $\frac{1}{4}$	169 56 $\frac{3}{4}$	169 32 $\frac{3}{4}$		N. E.
D — 3.	S. 28 E.	68	24 19 $\frac{2}{3}$	24 4 $\frac{1}{4}$	170 59	169 27 $\frac{1}{4}$	170 36 $\frac{3}{4}$	170 13 $\frac{1}{4}$		N. E.
♂ — 4.	S. 26 E.	81	25 17	25 28	171 44	170 31	171 40 $\frac{1}{2}$	171 17 $\frac{1}{2}$		
♀ — 5.	S. 9 E.	87	26 53 $\frac{3}{4}$	26 53	171 59	170 50 $\frac{1}{2}$	172 0	171 37 $\frac{1}{2}$		
u — 6.	S. 4 E.	62	27 54 $\frac{1}{2}$	27 52	172 3 $\frac{1}{2}$	170 58 $\frac{1}{8}$	172 4 $\frac{1}{8}$	171 45 $\frac{5}{8}$		
♀ — 7.	S. 79 W.	3	27 52 $\frac{2}{3}$	27 52	172 0 $\frac{1}{2}$	170 57	172 3	171 45		
h — 8.	S. 62 W.	71	28 25 $\frac{2}{3}$	28 24 $\frac{5}{6}$	170 49	169 42 $\frac{1}{2}$	171 3 $\frac{1}{2}$	170 31		
o — 9.	S. 58 W.	63	28 58	28 54 $\frac{3}{4}$	169 48	168 35 $\frac{3}{4}$	168 57 $\frac{3}{4}$	169 24 $\frac{1}{4}$		
D — 10.	S. 88 W.	57	28 58	28 57 $\frac{2}{3}$	168 42	167 21	168 14 $\frac{1}{4}$	168 10		
Norfolk Island.				29 1 $\frac{1}{4}$				168 10		
♂ — 11.	S. 11 E.	23	29 20	29 21 $\frac{1}{6}$	168 47	167 19 $\frac{1}{4}$	167 41 $\frac{5}{8}$	168 8		
♀ — 12.	South.	100.7	31 1 $\frac{1}{4}$	31 1 $\frac{1}{2}$	168 47	167 2 $\frac{1}{2}$	167 30 $\frac{1}{2}$	167 50 $\frac{1}{2}$		
u — 13.	S. 15 E.	106	32 43 $\frac{1}{2}$	32 54 $\frac{3}{4}$	169 21	167 35	168 26	168 22 $\frac{1}{4}$		
♀ — 14.	S. 39 E.	87	34 2	34 2 $\frac{1}{3}$	170 26	168 41 $\frac{7}{8}$	169 17 $\frac{3}{4}$	169 28 $\frac{1}{8}$		
h — 15.	S. 41 E.	119	35 32	35 32	172 2	170 11 $\frac{1}{4}$	170 47 $\frac{1}{8}$	170 56 $\frac{3}{4}$		
o — 16.	S. 34 E.	140	37 28	37 33	173 42	171 55 $\frac{3}{4}$	172 31 $\frac{1}{8}$	172 40 $\frac{1}{2}$		
D — 17.	S. 28 E.	120	39 19	39 24	174 57	173 1 $\frac{1}{8}$	173 36 $\frac{1}{2}$	173 45 $\frac{1}{8}$		
Q. Charlotte's Sound.				41 6				174 18 $\frac{7}{16}$		
It being a matter curious in itself, and perhaps of some use, to know the greatest angle which a ship lies down to, when going on a wind, or that she rolls when going before it in a high sea, I contrived, whilst in the Sound, to fix a graduated circle to one of the beams of the ship that passed through my cabin: an axis, passing through the center, carried a long slender rod, which had a pretty large leaden ball fixed to its lower end, whilst the upper end, above the center, served as an index to point out the degree which the ship rolled to, on the circle. The axis moved smoothly in its socket, and just free enough to let the ball turn it as the ship rolled. The upper end of the rod was adjusted to point exactly to O when the ship was upright in the Sound; and for the remainder of this Journal I have added another column, wherein is inserted the degrees to which, at different times, I observed the above-mentioned index point to.										
♀ Nov. 11.	S. 33 E.	69	42 20 $\frac{1}{2}$	42 21 $\frac{2}{3}$	175 29	175 22 $\frac{3}{8}$	174 54 $\frac{1}{2}$	175 15 $\frac{7}{8}$		
h — 12.	S. 22 E.	64	43 20 $\frac{1}{3}$	43 13 $\frac{1}{2}$	176 2	175 50 $\frac{1}{4}$	175 27 $\frac{5}{8}$	175 43 $\frac{1}{2}$		
o — 13.	S. 39 E.	83	44 18	44 32	177 14	177 13	176 50 $\frac{3}{8}$	177 6		
D — 14.	S. 41 E.	108	45 39 $\frac{1}{2}$	46 7 $\frac{1}{2}$	178 54			178 52	14	
♂ — 15.			47 5	47 47 $\frac{1}{2}$	181 15 $\frac{1}{2}$	181 11 $\frac{1}{4}$	180 49 $\frac{1}{8}$	181 4 $\frac{1}{4}$	09	
♀ — 16.	S. 42 E.	124	49 19 $\frac{1}{2}$	49 33 $\frac{1}{2}$	183 39 $\frac{1}{2}$	183 26 $\frac{7}{8}$	183 4 $\frac{1}{4}$	183 19 $\frac{3}{8}$	23	
It was this afternoon discovered, that the preceding differences between the log and observed latitudes were owing to the log-line having been marked, by mistake, a whole knot wrong: Corrected it.										
u — 17.	S. 41 E.	127	51 8 $\frac{1}{2}$	51 10 $\frac{3}{4}$	185 50 $\frac{1}{2}$	185 57 $\frac{3}{4}$	185 35 $\frac{1}{8}$	185 50	40 $\frac{1}{2}$	
♀ — 18.	S. 50 E.	141	52 39	52 44 $\frac{1}{8}$	188 45 $\frac{1}{2}$	188 58 $\frac{3}{4}$	188 36 $\frac{1}{8}$	188 50 $\frac{3}{4}$		
h — 19.	S. 64 $\frac{1}{2}$ E.	137	53 44 $\frac{3}{8}$	53 41 $\frac{1}{8}$	192 21 $\frac{1}{2}$			192 53		
o — 20.	S. 76 E.	134	54 13	54 12 $\frac{1}{2}$	196 4 $\frac{1}{2}$			197 2 $\frac{1}{2}$	14 $\frac{1}{2}$	
D — 21.	S. 30 E.	101	55 40	55 39	197 34 $\frac{1}{2}$			198 59		
♂ — 22.	S. 85 E.	118	55 50 $\frac{1}{4}$	55 48 $\frac{1}{3}$	201 4 $\frac{1}{2}$	203 4 $\frac{7}{8}$	192 42 $\frac{1}{4}$	202 55 $\frac{7}{8}$	30	

1774.	Course.	Distance.	Latitude South		Longitude East				Ship rolls.	Swell sets.
			By Account.	By Observation.	By Account.	By Watch K.	By Observation.	Corrected.		
		Miles.								
8 Nov. 23.	N. 82 E.	45	55 42	55 42 $\frac{2}{3}$	202 24 $\frac{1}{2}$	204 49	204 26 $\frac{3}{8}$	204 39 $\frac{1}{4}$	33	
4 — 24.	N. 86 E.	80	55 37	55 32 $\frac{1}{3}$	204 47	207 18 $\frac{7}{8}$	206 56 $\frac{1}{4}$	207 9 $\frac{3}{8}$	10	
2 — 25.	N. 80 E.	141	55 7 $\frac{3}{4}$	55 9 $\frac{1}{3}$	208 49	211 55 $\frac{1}{4}$	211 32 $\frac{5}{8}$	211 45 $\frac{1}{2}$	14	
2 — 26.	N. 89 E.	168.2	55 6 $\frac{1}{4}$	55 6	213 42			216 53 $\frac{1}{2}$	15	
0 — 27.	N. 89 E.	183	55 2 $\frac{3}{4}$	55 3	219 2	222 38	222 15 $\frac{3}{8}$	222 27 $\frac{3}{4}$	13	
D — 28.	S. 82 E.	166	55 24	55 25 $\frac{3}{4}$	223 40			227 14 $\frac{1}{4}$		
8 — 29.	N. 88 E.	153	55 18 $\frac{1}{2}$	55 22	228 10			231 52 $\frac{1}{2}$	31	
8 — 30.	S. 78 E.	39	55 26 $\frac{1}{2}$	55 31 $\frac{3}{3}$	229 17			233 7 $\frac{3}{4}$		
4 Dec. 1.	N. 88 E.	56	55 29 $\frac{1}{2}$	55 32	231 3			235 2	13	
2 — 2.	N. 64 $\frac{1}{2}$ E.	90	54 50 $\frac{1}{2}$	54 55 $\frac{1}{2}$	233 26	237 44 $\frac{7}{8}$	237 22 $\frac{1}{4}$	237 33 $\frac{3}{8}$		
2 — 3.	N. 38 E.	70	54 0 $\frac{1}{4}$	54 0 $\frac{1}{4}$	234 41			238 38 $\frac{1}{2}$	18	N.
0 — 4.	N. 69 $\frac{1}{2}$ E.	117	53 19	53 15 $\frac{1}{4}$	237 49	241 48 $\frac{3}{8}$	241 25 $\frac{3}{4}$	241 36 $\frac{3}{8}$		N.
D — 5.	N. 87 E.	129	53 8 $\frac{1}{2}$	53 7 $\frac{7}{8}$	241 23 $\frac{1}{2}$	245 22 $\frac{5}{8}$	245 0	245 10 $\frac{3}{8}$		N.
8 — 6.	S. 89 E.	168	53 11	53 10 $\frac{1}{2}$	246 3 $\frac{1}{2}$	249 32 $\frac{7}{8}$	249 10 $\frac{1}{4}$	249 20 $\frac{3}{8}$	38	
8 — 7.	S. 86 E.	120	53 19	53 19 $\frac{6}{8}$	249 23	252 45	252 17 $\frac{3}{4}$	252 32 $\frac{1}{4}$		
4 — 8.	S. 84 E.	99	53 29 $\frac{1}{2}$	53 31	252 7	255 24	255 1 $\frac{7}{8}$	255 11		N. E.
2 — 9.	S. 89 E.	76	53 32 $\frac{1}{3}$	53 37 $\frac{1}{3}$	254 17			257 17	14	W.
2 — 10.	S. 70 E.	64	53 59 $\frac{2}{3}$	53 53 $\frac{2}{3}$	255 58	259 6 $\frac{1}{2}$	258 44 $\frac{3}{8}$	258 53		
0 — 11.	N. 87 E.	180	53 49 $\frac{2}{3}$	53 37 $\frac{2}{3}$	261 3	264 2 $\frac{3}{4}$	263 41	263 49		
D — 12.			53 42	53 24 $\frac{1}{2}$	265 2	268 4 $\frac{1}{2}$	267 30	267 50 $\frac{1}{2}$		
8 — 13.	N. 89 E.	74	53 24	53 23 $\frac{3}{4}$	267 5	270 9 $\frac{1}{2}$	270 39	269 55 $\frac{1}{4}$		
8 — 14.	S. 89 E.	127.3	53 26	53 25 $\frac{1}{3}$	270 41	273 27 $\frac{7}{8}$	273 57 $\frac{3}{8}$	273 13 $\frac{3}{8}$		
4 — 15.	S. 87 E.	120	53 31 $\frac{2}{3}$	53 30 $\frac{1}{3}$	274 5	276 49 $\frac{1}{4}$	277 19 $\frac{1}{4}$	276 35		
2 — 16.	N. 88 E.	132 $\frac{1}{2}$	53 25 $\frac{2}{3}$	53 26 $\frac{1}{2}$	277 50	280 32 $\frac{7}{8}$	281 2 $\frac{3}{8}$	280 18 $\frac{1}{8}$		
2 — 17.	N. 88 $\frac{1}{2}$ E.	118	53 24 $\frac{1}{2}$	53 21 $\frac{5}{8}$	281 4	283 41 $\frac{1}{2}$	284 11	283 26 $\frac{1}{2}$		
	Cape Disfada.			53 4 $\frac{1}{4}$				285 42		
0 — 18.	S. 72 E.	114	53 57	54 12 $\frac{1}{2}$	284 9	286 47 $\frac{1}{8}$	287 16 $\frac{5}{8}$	286 31 $\frac{3}{4}$		
	Cape Noir.			54 32 $\frac{1}{2}$				287 56 $\frac{3}{4}$		
D — 19.	S. 55 E.	100	55 10 $\frac{1}{2}$	55 20 $\frac{1}{3}$	286 29	289 16 $\frac{1}{4}$	289 45 $\frac{3}{4}$	289 0 $\frac{1}{2}$		
8 — 20.	S. 57 E.	36	55 39 $\frac{2}{3}$	55 39 $\frac{1}{2}$	287 22	290 7 $\frac{3}{8}$	290 36 $\frac{7}{8}$	289 51 $\frac{3}{8}$		
	Christmas Sound.			55 22				289 58 $\frac{2}{3}$		
8 — 28.				55 32 $\frac{2}{3}$	287 44 $\frac{1}{2}$	290 26 $\frac{3}{8}$	290 18 $\frac{3}{4}$	290 5 $\frac{1}{8}$		
	St. Ildefonso's Isles.			55 51				290 32		
	Cape Horn.			55 59				292 34		
	Barnevelt's Isles.			55 49				293 2		
	Evout's Isles.			55 34 $\frac{1}{2}$				293 1		
4 — 29.	S. 78 E.	92	55 43 $\frac{1}{2}$	55 43 $\frac{7}{8}$	290 32	293 44 $\frac{1}{2}$	293 36 $\frac{7}{8}$	293 23 $\frac{1}{2}$		
2 — 30.	N. 26 E.	26	55 20 $\frac{1}{2}$	54 53	290 56	295 20 $\frac{3}{4}$	295 13 $\frac{1}{8}$	294 59 $\frac{1}{2}$		
	Cape Succes.			55 1				294 33		
	Succes Bay.			54 49 $\frac{3}{4}$				294 35		
	East Cape of Staten Land.			54 53 $\frac{3}{4}$				295 13 $\frac{1}{4}$		
	Cape St. Anthony.			54 46 $\frac{3}{4}$						
	Cape St. Diego.			54 33				294 46		
2 — 31.	N. 88 E.	23	54 52 $\frac{1}{4}$	54 42 $\frac{1}{2}$	291 46	296 4 $\frac{3}{8}$	295 56 $\frac{3}{4}$	295 43 $\frac{1}{4}$		

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1774.	Course.	Dif- tance.	Latitude South		Longitude East				Ship rolls.	Swell sets.	
			By Ac- count.	By Ob- servation.	By Ac- count.	By Watch K.	By Obser- vation.	Corrected.			
		Miles.									
			Ship at anchor off New Year's Isle.		54	41				295 46	
			New Year's Harbour.		54	48 $\frac{1}{2}$				295 49	
			Cape St. Juan.		54	47 $\frac{1}{8}$				296 13	
♂	1775. Jan.	3.	S. 8 W.	19	55 3	54 55 $\frac{4}{5}$	291 48	296 15	296 7 $\frac{3}{8}$	295 54	N. E.
♀	—	4.	S. 51 E.	75	55 42 $\frac{2}{3}$	55 32 $\frac{2}{3}$	293 31	298 12 $\frac{1}{2}$	298 4 $\frac{7}{8}$	297 51 $\frac{1}{2}$	
♂	—	5.	S. 49 E.	138	57 3 $\frac{2}{3}$	57 8 $\frac{1}{2}$	296 50	301 47 $\frac{3}{4}$	301 40 $\frac{1}{8}$	301 26 $\frac{3}{4}$	
♀	—	6.	S. 70 E.	118	57 49	57 51 $\frac{1}{3}$	300 17	305 40 $\frac{1}{4}$	305 2	305 19 $\frac{1}{4}$	
♂	—	7.	N. 46 E.	63	57 7 $\frac{2}{3}$	57 0 $\frac{1}{8}$	301 54	307 11 $\frac{5}{8}$	306 47	306 50 $\frac{5}{8}$	
			Sounded: no ground with 150 fathoms.								
⊙	—	8.	N. 26 E.	94	55 32 $\frac{3}{4}$	55 8 $\frac{2}{3}$	303 11	308 19 $\frac{3}{4}$	307 37 $\frac{1}{8}$	307 58 $\frac{3}{4}$	
♂	—	9.	S. 88 E.	71	55 10 $\frac{1}{2}$	55 11 $\frac{7}{8}$	305 18			310 13 $\frac{1}{2}$	
♀	—	10.	N. 49 E.	50	54 40	54 35 $\frac{1}{2}$	306 32			311 36 $\frac{3}{4}$	
♂	—	11.	S. 87 E.	108	54 41 $\frac{1}{3}$	54 36 $\frac{4}{5}$	309 39 $\frac{1}{2}$	315 15 $\frac{1}{2}$	314 32 $\frac{7}{8}$	314 54 $\frac{1}{2}$	
♀	—	12.	N. 85 E.	79	54 29 $\frac{3}{4}$	54 28 $\frac{1}{4}$	311 56 $\frac{1}{2}$			317 10 $\frac{3}{4}$	
♂	—	13.	S. 52 E.	62	55 6 $\frac{1}{2}$	55 0 $\frac{1}{2}$	313 20 $\frac{1}{2}$			318 32 $\frac{3}{4}$	15 S. W.
♂	—	14.	N. 52 E.	86	54 14	53 56 $\frac{3}{4}$	315 15 $\frac{1}{2}$	320 46 $\frac{3}{4}$	320 4 $\frac{1}{8}$	320 25 $\frac{3}{4}$	
			Sounded several times, and had 175 and 120: bottom mud.								
⊙	—	15.	S. 39 E.	44	54 30 $\frac{1}{4}$	54 29 $\frac{1}{2}$	316 2 $\frac{1}{2}$			321 7 $\frac{1}{2}$	
			Sounded: 110 fathoms; the bottom mud.								
♂	—	16.	N. 82 E.	24	54 27	54 25 $\frac{1}{4}$	316 43	322 2 $\frac{3}{8}$	321 20	321 41 $\frac{5}{8}$	
			Willis's Isles.			54 0				321 30 $\frac{1}{3}$	
			Cape North.			54 4 $\frac{3}{4}$				321 45	
			Cape Buller.			53 58 $\frac{1}{2}$				322 20	
♂	—	17.	N. 63 E.	41	54 6 $\frac{1}{4}$	54 0 $\frac{3}{4}$	317 44	323 4 $\frac{3}{8}$	322 21 $\frac{3}{4}$	322 43 $\frac{3}{8}$	
			Cape Saunders.			54 6 $\frac{1}{2}$				323 2 $\frac{1}{2}$	
			Cape George.			54 17				323 27 $\frac{1}{2}$	
			Cape Charlotte.			54 32				323 48 $\frac{1}{2}$	
♀	—	18.	S. 59 E.	59	54 31 $\frac{1}{4}$	54 30 $\frac{1}{8}$	319 12	324 30 $\frac{1}{4}$	323 47 $\frac{5}{8}$	324 9 $\frac{1}{4}$	
			Sounded: 80 fathoms; bottom mud.								
♂	—	19.	S. 7 E.	17	54 47	54 42 $\frac{2}{3}$	319 15	324 32 $\frac{1}{2}$	323 49 $\frac{7}{8}$	324 11 $\frac{1}{2}$	
			The Lurker, off Sand-			54 42				324 1	
			wich Bay.								
			Cooper's Island.			54 57				323 55 $\frac{2}{3}$	
♀	—	20.	S. 35 W.	23	55 2	55 3 $\frac{3}{4}$	318 53	324 9 $\frac{7}{8}$	323 26 $\frac{7}{8}$	323 48 $\frac{7}{8}$	39
			Sounded: no ground with 120 fathoms.								
			Cape Disappointment.			54 58				323 45	
			Green Isles.			54 59				323 45	
			Pickersgill's Island.			54 42 $\frac{1}{2}$				323 2	
			Clerke's Isles.			55 5 $\frac{1}{2}$				325 18	
♂	—	21.	S. 75 E.	48	55 16 $\frac{1}{4}$	55 16 $\frac{1}{2}$	320 13	325 43 $\frac{2}{3}$	325 0 $\frac{1}{2}$	325 22 $\frac{2}{3}$	
⊙	—	22.	N. 32 E.	21	54 59	54 59 $\frac{1}{2}$	320 32			325 36 $\frac{2}{3}$	
♂	—	23.	S. 63 W.	15	55 5 $\frac{3}{4}$	55 6 $\frac{1}{2}$	320 9			325 8 $\frac{2}{3}$	
			Sounded: and had 60 and 75 fathoms; bottom shells.								
♂	—	24.	N. 54 E.	10	54 59 $\frac{3}{4}$	55 1	320 24			325 18 $\frac{2}{3}$	

1775.	Course.	Distance. Miles.	Latitude South		Longitude East.				Ship rolls.	Swell sets.
			By Ac- count.	By Obser- vation.	By Ac- count.	By Watch K.	By Obser- vation.	Corrected.		
8 Jan. 25.	S. 44 E.	81	55 57 $\frac{3}{4}$	56 0 $\frac{1}{2}$	322 2 $\frac{1}{2}$	327 12 $\frac{1}{4}$	326 29	326 51 $\frac{1}{4}$		
24 — 26.	S. 41 E.	111	57 23 $\frac{3}{4}$	57 38 $\frac{1}{2}$	324 14 $\frac{1}{2}$	329 18 $\frac{5}{8}$	329 13 $\frac{1}{2}$	328 57 $\frac{5}{8}$		
8 — 27.	South.	123	59 41 $\frac{1}{2}$	59 44	324 14 $\frac{1}{2}$	329 21 $\frac{7}{8}$	329 16 $\frac{3}{4}$	329 0 $\frac{7}{8}$		
Sounded: No ground with 140 fathoms.										
h — 28.	S. 59 E.	33	59 58 $\frac{3}{4}$	60 5 $\frac{1}{8}$	324 56 $\frac{1}{2}$	330 55 $\frac{1}{4}$	330 50 $\frac{1}{8}$	330 34 $\frac{1}{4}$		
o — 29.	N. 58 W.	13	59 57	60 1 $\frac{1}{2}$	324 31 $\frac{1}{2}$			330 13 $\frac{1}{4}$		
d — 30.	N. 30 E.	31	59 34 $\frac{1}{2}$	59 34	325 2 $\frac{1}{2}$			330 49 $\frac{1}{4}$		
Friezland's Peak.										
Cape Bristol.										
South Thule.										
8 — 31.	N. 69 E.	59	59 13 $\frac{1}{2}$	59 12 $\frac{1}{3}$	326 48 $\frac{1}{2}$	333 1 $\frac{1}{8}$	332 56	332 40 $\frac{1}{8}$		
8 Feb. 1.	N. 3 E.	46	58 26 $\frac{3}{4}$	58 25	326 53 $\frac{1}{2}$	333 6 $\frac{1}{6}$	333 1	332 45 $\frac{5}{6}$		
Sounded: No ground with 160 fathoms.										
Cape Montagu.										
24 — 2.	N. 3 E.	37	57 47	57 46	326 58	333 29	333 23 $\frac{5}{6}$	333 14		
Sounded: No ground with 220 fathoms.										
Saunders's Isle.										
8 — 3.	N. 8 E.	31	57 16 $\frac{1}{2}$	57 15	327 6			333 2		
Candlemas Isles.										
h — 4.	N. 52 E.	39	56 47 $\frac{1}{2}$	56 44	328 7	334 34 $\frac{1}{4}$	334 29	334 13 $\frac{1}{4}$		N. W.
o — 5.	S. 72 E.	68	57 5	57 9 $\frac{1}{2}$	330 4 $\frac{1}{2}$	336 31 $\frac{1}{2}$	336 26 $\frac{1}{4}$	336 10 $\frac{1}{2}$		
d — 6.	S. 39 E.	88	58 18	58 19	331 48 $\frac{1}{2}$			337 56 $\frac{1}{2}$		
8 — 7.	S. 88 E.	116	58 22 $\frac{1}{4}$	58 24 $\frac{1}{4}$	335 33 $\frac{1}{2}$	342 5 $\frac{1}{2}$	342 0 $\frac{1}{4}$	341 44 $\frac{1}{2}$		
8 — 8.	S. 81 E.	106	58 40	58 29 $\frac{7}{8}$	338 53 $\frac{1}{2}$	345 27	345 21 $\frac{3}{4}$	345 6		
24 — 9.	N. 85 E.	47	58 26	58 26 $\frac{1}{3}$	340 23 $\frac{1}{2}$	347 5 $\frac{1}{2}$	347 0 $\frac{1}{4}$	346 44 $\frac{1}{2}$		
8 — 10.	N. 81 $\frac{1}{2}$ E.	76	58 15	58 15	342 57 $\frac{1}{2}$	349 32 $\frac{1}{4}$	349 27	349 11 $\frac{1}{4}$		
h — 11.	S. 89 E.	80	58 16	58 6 $\frac{2}{3}$	345 27 $\frac{1}{2}$	352 11 $\frac{1}{4}$	352 6	351 50 $\frac{1}{4}$		
o — 12.	S. 81 E.	27	58 11	58 20 $\frac{2}{3}$	346 20	353 32 $\frac{1}{8}$	353 26 $\frac{7}{8}$	353 11 $\frac{1}{8}$		S. E.
d — 13.	N. 66 E.	59	57 56 $\frac{1}{3}$	57 56 $\frac{1}{2}$	348 1	355 34	355 28 $\frac{3}{4}$	355 13	12	West.
8 — 14.	N. 75 E.	120	57 23 $\frac{1}{2}$	57 23 $\frac{3}{4}$	351 47	359 35 $\frac{3}{8}$	359 30 $\frac{1}{8}$	359 14 $\frac{3}{8}$	37	East.
8 — 14.	N. 75 $\frac{1}{2}$ E.	157	56 43 $\frac{1}{4}$	56 37	356 35	4 20 $\frac{1}{2}$	4 15 $\frac{1}{4}$	3 59 $\frac{1}{2}$		
Dropped 360° and repeated a day.										
8 — 15.	N. 40 E.	82	55 34 $\frac{2}{3}$	55 26 $\frac{1}{8}$	358 15 $\frac{1}{2}$	6 2	5 56 $\frac{3}{4}$	5 41		
24 — 16.	N. 17 E.	58	54 31 $\frac{1}{2}$	54 31 $\frac{1}{2}$	358 45	6 22 $\frac{1}{8}$	6 16 $\frac{7}{8}$	6 1 $\frac{1}{8}$		
8 — 17.	N. 85 $\frac{1}{2}$ E.	98	54 23 $\frac{3}{4}$	54 23 $\frac{7}{8}$	1 35	8 58 $\frac{3}{4}$	8 37 $\frac{1}{3}$	8 37 $\frac{3}{4}$		North.
h — 18.	East.	111.3	54 24	54 23 $\frac{1}{8}$	4 47			11 56 $\frac{3}{4}$		
o — 19.	N. 74 E.	35	54 13 $\frac{1}{2}$	54 11	5 45			13 1 $\frac{3}{4}$		
d — 20.	S. 85 $\frac{1}{2}$ E.	105	54 21 $\frac{1}{2}$	54 15 $\frac{2}{3}$	8 45	16 29 $\frac{1}{2}$	16 18 $\frac{1}{8}$	16 8 $\frac{1}{2}$		N. E.
8 — 21.	S. 85 $\frac{1}{2}$ E.	82	54 22	54 24 $\frac{2}{3}$	11 6	18 55 $\frac{1}{8}$	18 33 $\frac{5}{8}$	18 34 $\frac{1}{4}$		
8 — 22.	S. 69 E.	118	55 7	55 10 $\frac{1}{2}$	14 21	22 10 $\frac{3}{4}$	22 2	21 50		S. by W.
24 — 23.	N. 61 E.	101	54 21 $\frac{1}{2}$	54 26	16 54			24 39	18	
8 — 24.	N. 31 E.	106	52 56 $\frac{1}{2}$	52 51 $\frac{1}{4}$	18 30 $\frac{1}{2}$	26 52 $\frac{1}{4}$	26 6	26 31 $\frac{3}{4}$		
h — 25.	N. 29 E.	148	50 42 $\frac{1}{4}$	50 33 $\frac{1}{2}$	20 33 $\frac{1}{2}$	29 0 $\frac{1}{2}$	28 19 $\frac{1}{4}$	28 40		
o — 26.	N. 31 E.	88	49 18	49 20 $\frac{3}{4}$	21 43 $\frac{1}{2}$	30 17 $\frac{1}{2}$	29 45 $\frac{1}{2}$	29 57 $\frac{1}{4}$		
d — 27.	N. 47 E.	97	48 15	47 58 $\frac{2}{3}$	23 57 $\frac{1}{2}$			31 53 $\frac{1}{4}$		
8 — 28.	N. 57 E.	82	47 13 $\frac{2}{3}$	46 58 $\frac{1}{4}$	26 12 $\frac{1}{2}$	34 10 $\frac{1}{2}$	33 38 $\frac{1}{2}$	33 50 $\frac{3}{8}$		S.E.b.E.

ON BOARD THE RESOLUTION.

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1775.	Course.	Distance. Miles.	Latitude South		Latitude East				Ship rolls.	Swell sets.
			By Ac- count.	By Obser- vation.	By Ac- count.	By Watch K.	By Obser- vation.	Corrected.		
March 1.	N. 71 W.	92	46 28 $\frac{1}{2}$	46 28	24 10 $\frac{1}{2}$			31 45 $\frac{1}{2}$		
2.	N. 30 W.	63	45 33 $\frac{1}{2}$	45 32 $\frac{1}{2}$	23 25	31 15 $\frac{7}{8}$	30 43 $\frac{7}{8}$	30 56	39	
3.	N. 25 W.	100	44 2 $\frac{1}{2}$	43 53 $\frac{3}{4}$	22 20	30 7 $\frac{3}{8}$	29 35 $\frac{3}{8}$	29 47 $\frac{3}{8}$		E. S. E.
4.	N. 85 W.	52	43 49	43 46 $\frac{1}{2}$	21 8	29 9 $\frac{1}{4}$	28 37 $\frac{1}{4}$	28 49 $\frac{5}{8}$		E. S. E.
5.	N. 59 $\frac{1}{2}$ W.	73	43 46 $\frac{1}{2}$	43 49 $\frac{1}{2}$	19 27	27 33	27 1	27 13 $\frac{5}{8}$		E. S. E.
6.	N. 9 W.	79	42 31 $\frac{1}{2}$	42 23 $\frac{1}{2}$	19 7	27 33 $\frac{1}{2}$	26 59 $\frac{1}{2}$	27 14 $\frac{1}{4}$		Eaft.
7.	N. 52 W.	41	41 59	41 48 $\frac{1}{2}$	18 24	26 44 $\frac{1}{4}$	26 10 $\frac{7}{8}$	26 25		N. E.
8.	S. 62 W.	31	42 3	41 47 $\frac{3}{4}$	17 47	26 13 $\frac{7}{8}$	25 40 $\frac{1}{2}$	25 54 $\frac{7}{8}$		
9.	S. 71 W.	46	42 2 $\frac{1}{2}$	42 6	16 49	25 18 $\frac{1}{4}$	24 45 $\frac{3}{8}$	25 0		
10.	N. 31 W.	78	40 59 $\frac{1}{2}$	40 56 $\frac{3}{4}$	15 55	24 23 $\frac{3}{8}$	23 51 $\frac{1}{8}$	24 4 $\frac{7}{8}$		Eaft.
11.	N. 58 W.	47	40 32	40 3	15 2	23 59	23 26 $\frac{3}{4}$	23 40 $\frac{3}{4}$		
12.	N. 11 W.	42	39 22	38 50 $\frac{5}{8}$	14 50	24 34 $\frac{3}{8}$	24 2 $\frac{1}{8}$	24 16 $\frac{3}{8}$		
13.	N. 45 $\frac{1}{2}$ W.	121	37 25 $\frac{1}{2}$	37 18 $\frac{1}{8}$	13 10	22 50 $\frac{1}{2}$	22 18 $\frac{1}{4}$	22 32 $\frac{3}{4}$		
14.	N. 15 E.	76	36 5	36 27 $\frac{1}{2}$	13 35	22 33	22 0 $\frac{3}{4}$	22 15 $\frac{1}{2}$		
Sounded: 80 fathoms, stony ground.										
15.	N. 17 E.	62	35 28	35 16	14 2	22 34 $\frac{1}{2}$	22 2 $\frac{1}{2}$	22 17 $\frac{3}{4}$		
Sounded, and had 56 fathoms.										
16.	N. 47 W.	27	34 57 $\frac{1}{2}$	34 49	13 38	22 14 $\frac{1}{4}$	22 20 $\frac{1}{2}$	21 57 $\frac{3}{4}$		
Saw land. Sounded, and had 40 fathoms.										
17.	S. 72 W.	50	35 4 $\frac{1}{2}$	35 2	12 43	21 10 $\frac{1}{2}$	20 39	20 53 $\frac{3}{4}$		Eaft.
Sounded, and had 50 fathoms.										
18.	N. 83 W.	9	35 0 $\frac{1}{4}$	34 59 $\frac{1}{2}$	12 33	20 53 $\frac{1}{2}$	20 22	20 36		
19.	N. 83 W.	23	34 57	34 51 $\frac{1}{2}$	12 5	20 20 $\frac{1}{4}$	19 48 $\frac{3}{4}$	20 4		
20.	N. 61 W.	93	34 6 $\frac{1}{2}$	34 13	10 25 $\frac{1}{2}$	18 12 $\frac{1}{2}$	17 40 $\frac{3}{4}$	17 56 $\frac{1}{8}$		
Cape Town.										
April 28.	N. 58 W.	101	33 2 $\frac{1}{2}$	32 50	16 41	16 19 $\frac{7}{8}$		16 19 $\frac{7}{8}$		
29.	N. 57 W.	140	31 33 $\frac{1}{2}$	31 31	14 23	13 47		13 47		
30.	N. 58 W.	127	30 24 $\frac{1}{2}$	30 17 $\frac{3}{4}$	12 17	11 31 $\frac{1}{4}$		11 31 $\frac{1}{4}$		
May 1.	N. 51 W.	98	29 16	29 12	10 49	9 55 $\frac{1}{2}$		9 55 $\frac{1}{2}$		
2.	N. 51 W.	95	28 12	28 11 $\frac{1}{2}$	9 25	8 23		8 23		
3.	N. 50 W.	101	27 5 $\frac{1}{2}$	27 1	7 49 $\frac{1}{2}$	6 58	7 7 $\frac{1}{4}$	6 58		
4.	N. 38 W.	35	26 32 $\frac{1}{4}$	26 34	7 25	6 36 $\frac{1}{8}$	6 29 $\frac{1}{8}$	6 36 $\frac{1}{8}$		
5.	N. 36 W.	39	26 3 $\frac{1}{2}$	26 2	6 59					
6.	N. 45 $\frac{1}{2}$ W.	86	25 1 $\frac{3}{4}$	25 0 $\frac{1}{4}$	5 51	4 56	4 49	4 56		
7.	N. 44 W.	122	23 33	23 27 $\frac{1}{2}$	4 12	3 19 $\frac{3}{8}$	3 29 $\frac{1}{2}$	3 19 $\frac{3}{8}$		
8.	N. 44 W.	110	22 8	22 5	2 46	1 49	2 4 $\frac{3}{8}$	1 49		
9.	N. 48 W.	109	20 51 $\frac{1}{2}$	20 46 $\frac{1}{4}$	1 13	0 14 $\frac{1}{8}$	0 23	0 14 $\frac{1}{8}$		
West. West.										
10.	N. 48 W.	91	19 44 $\frac{3}{4}$	19 39	0 5	0 58 $\frac{1}{2}$	0 49 $\frac{5}{8}$	0 58 $\frac{1}{2}$		
11.	N. 47 W.	78	18 46 $\frac{1}{2}$	18 52 $\frac{5}{8}$	1 05	2 9 $\frac{1}{8}$	2 2 $\frac{1}{4}$	2 9 $\frac{1}{8}$		
12.	N. 48 W.	37	18 28 $\frac{1}{2}$	18 27 $\frac{1}{2}$	1 35	2 41	2 15 $\frac{5}{8}$	2 41		
13.	N. 42 W.	60	17 43	17 43 $\frac{1}{8}$	2 19	3 19	2 53 $\frac{5}{8}$	3 19		North.
14.	N. 42 W.	75	16 47	16 46 $\frac{2}{3}$	3 12	4 19 $\frac{1}{6}$	4 9 $\frac{1}{2}$	4 19 $\frac{1}{6}$		N. E.
15.	N. 52 W.	72	16 3	16 1 $\frac{1}{4}$	4 13	5 16 $\frac{3}{4}$		5 16 $\frac{3}{4}$		
St. Helena.										
22.	N. 55 W.	47	15 28	15 24	6 29 $\frac{1}{2}$	6 28 $\frac{5}{8}$	7 22 $\frac{1}{4}$	6 29 $\frac{1}{2}$		

1775.	Course.	Dif- tance. Miles.	Latitude South		Longitude West				Ship rolls.	Swell sets.
			By Ac- count.	By Obser- vation.	By Ac- count.	By Watch K.	By Obser- vation.	Corrected.		
			°	°	°	°	°	°		
♂ May 23.	N. 58 W.	104	14 29	14 33½	8 1	8 1	8 38½	8 1¼		
♀ — 24.	N. 58 W.	134	13 22½	13 30½	9 58	9 54	10 7¼	9 54¼		
♂ — 25.	N. 29 W.	129	11 38	11 42½	11 3	11 2¼	11 31½	11 3		
♀ — 26.	N. 23 W.	123	9 49¼	9 55½	11 55	11 56½	12 25½	11 57¼		
♂ — 27.	N. 36 W.	117	8 21	8 22½	13 3	13 3¼	13 32½	13 3¾		
○ — 28.	N. 70 W.	68	7 57½	7 58½	14 7	14 11¼	14 40	14 11¾		
	Ascension.			7 57				14 30		
♂ June 1.	N. 44 W.	81	6 57	6 59½	15 27	15 31¼	15 7¼	15 30¼		
♀ — 2.	N. 83 W.	95	6 48	6 43¼	17 2	17 19¼	17 5¾	17 17¾		
♂ — 3.	N. 82 W.	116	6 27¼	6 26½	18 58	19 28	19 23¾	19 25		
○ — 4.	N. 81 W.	125	6 7	6 0¼	21 2	21 39	21 4¼	21 35		
♂ — 5.	N. 80 W.	121	5 39½	5 39	23 2	23 49	23 15½	23 43		
♀ — 6.	N. 78 W.	129	5 12¼	5 8¼	25 9	26 7¼	25 44	26 0¼		
♂ — 7.	N. 78 W.	85	4 51½	4 57½	26 32	27 56½	27 31¼	27 48½		
♀ — 8.	N. 49 W.	92	3 57	3 44	27 42	29 40	29 23½	29 30¾		
♂ — 9.	S. 88 W.	110	3 50¼	3 43½	29 32	32 14¼	31 44¼	32 4¼		
	Island Ferdinando de Noronha.			3 56½				32 23		
♂ — 10.	N. 12 E.	99	2 6	1 57	29 10	32 19½	32 20½	32 7¾		
○ — 11.	N. 16 E.	97	0 23¼	0 11¼	28 50	32 10¼	32 21¼	31 57¼		
	North.			North.						
♂ — 12.	N. 19 E.	128	1 50¼	1 50½	28 8	31 51¼	31 38¼	31 37½		
♀ — 13.	N. 5½ E.	93	3 23	3 49¼	27 59	31 48	31 35	31 33½		
♂ — 14.	N. 31 W.	46	4 29	4 31	28 23	31 40¼	31 27¼	31 25		
♀ — 15.	N. 20 E.	68	5 33	5 38	27 59	30 59	30 46	30 43		
♂ — 16.	N. 27 E.	32	6 1¼	6 9½	27 44½	30 31½	30 18½	30 15		
♀ — 17.	N. 25 W.	13	6 21½	6 13	27 48	30 19	30 6	30 2		
○ — 18.	N. 19 W.	16	6 28½	6 12¾	27 48½	30 28½	30 15½	30 11		
♂ — 19.	N. 11 E.	43	6 54¼	7 8½	27 39	30 31¾	30 17¾	30 13¾		South.
♀ — 20.	N. 40½ W.	80½	8 9	8 10½	28 32	31 17½	31 25½	30 59		South.
♂ — 21.	N. 45 W.	109½	9 27½	9 28¼	29 50½	32 58¼	32 53¼	32 39¼		South.
♀ — 22.	N. 39 W.	133		11 12	31 15½	34 12¾	34 7¾	33 52¾		
♂ — 23.	N. 34 W.	122		12 53½	32 25	35 27¾	35 22¼	35 7¼		
♀ — 24.	N. 30 W.	103	14 24½	14 37½	33 17½	36 28½	36 23½	36 7½		S. by E.
○ — 25.	N. 27 W.	114½		16 20¼	34 11½	37 31¼	37 26¼	37 10		
♂ — 26.	N. 37½ W.	118	17 54¼	17 53½	35 28	38 46½	38 41½	38 24½		
♀ — 27.	N. 25 W.	103	19 27	19 31¾	36 16	39 29¾	39 24¾	39 7¾		
♂ — 28.	N. 17 W.	114		21 20½	36 52	40 6	40 1	39 44		
♀ — 29.	N. 11 W.	111		23 10½	37 15	40 28	40 23	40 5¾		
♂ — 30.	N. 14 W.	120	25 6¼	25 9½	37 46½	41 5¾	41 0¾	40 43¾		
♂ July 1.	N. 15 W.	118½		27 4¾	38 21	41 30¾	40 58	41 7¾		
♀ — 2.	N. 5 W.	98		28 42	38 31	41 52½	41 7¾	41 29½		
♂ — 3.	N. 28 E.	88		29 59½	37 44	41 18¼	40 15¾	40 55½		West.
♀ — 4.	N. 15 E.	82		31 18½	37 19	40 50¾	39 52¾	40 27¾		
♂ — 5.	N. 11 E.	75		32 31½	37 2	40 31½	39 34¼	40 7¾		
♀ — 6.	N. 2 E.	36½		33 8½	37 0½	40 21½	39 12½	39 57½		

1775.	Course.	Distance.	Latitude North		Longitude West				Ship rolls.	Swell sets.
			By Ac-	By Obser-	By Ac-	By Watch	By Obser-	Corrected.		
		Miles.	count.	vation.	count.	K.	vation.			
♀ July 7.	N. 3 E.	25		33 32 $\frac{3}{4}$	36 59	40 8 $\frac{3}{4}$	39 20	39 44 $\frac{3}{4}$		East.
♂ — 8.	N. 11 E.	35	34 8 $\frac{1}{4}$	34 12	36 51	40 7 $\frac{1}{4}$	39 26 $\frac{1}{4}$	39 43 $\frac{1}{4}$		
⊙ — 9.	N. 19 E.	45	34 50 $\frac{1}{2}$	35 3	36 32 $\frac{1}{2}$	40 10 $\frac{1}{4}$	39 29 $\frac{1}{4}$	39 46 $\frac{1}{4}$		
♂ — 10.	N. 46 E.	68 $\frac{1}{2}$	35 50 $\frac{1}{2}$	35 45 $\frac{1}{2}$	35 33	39 14 $\frac{3}{4}$	38 33 $\frac{3}{4}$	38 50 $\frac{3}{4}$		
♂ — 11.	N. 63 E.	154		36 55 $\frac{3}{4}$	32 43	36 21 $\frac{1}{4}$	35 40 $\frac{1}{2}$	35 57 $\frac{1}{4}$		
♀ — 12.	N. 62 E.	165	38 12 $\frac{1}{2}$	38 12 $\frac{1}{8}$	29 40	33 6 $\frac{1}{4}$	32 26	32 42 $\frac{3}{4}$		
♂ — 13.	N. 83 E.	133	38 27	38 29 $\frac{2}{3}$	26 53	30 9 $\frac{1}{4}$	29 28 $\frac{1}{2}$	29 45 $\frac{1}{4}$		
	Villa de Horta, Fayal.			38 32 $\frac{1}{3}$				28 32 $\frac{2}{3}$		
♀ — 19.	N. 59 E.	43	38 54	38 52	24 58 $\frac{1}{2}$	28 3 $\frac{1}{4}$		27 40		
♂ — 20.	N. 76 E.	100	39 18 $\frac{1}{4}$	39 13 $\frac{1}{3}$	22 53 $\frac{1}{2}$	25 56 $\frac{1}{4}$	25 57 $\frac{1}{4}$	25 33 $\frac{1}{2}$		
♀ — 21.	N. 79 $\frac{1}{2}$ E.	79	39 26 $\frac{1}{2}$	39 26 $\frac{2}{3}$	21 13 $\frac{1}{2}$	24 15	24 35 $\frac{1}{2}$	23 52 $\frac{3}{4}$		South.
♂ — 22.	N. 81 E.	57	39 35 $\frac{2}{3}$	39 37 $\frac{2}{3}$	19 58 $\frac{1}{2}$	22 59 $\frac{3}{4}$	22 39 $\frac{1}{2}$	22 38		
⊙ — 23.	N. 51 E.	128	40 58	40 48 $\frac{3}{4}$	17 47 $\frac{1}{2}$	20 36 $\frac{1}{2}$	20 11	20 14 $\frac{1}{4}$		East. S. E.
♂ — 24.	N. 49 E.	129	42 13 $\frac{1}{4}$	42 6 $\frac{1}{2}$	15 38 $\frac{1}{2}$	18 31	18 5 $\frac{1}{2}$	18 8 $\frac{1}{2}$		
♂ — 25.	N. 39 E.	124	43 43	43 40 $\frac{1}{2}$	13 51	16 44 $\frac{3}{4}$	16 19 $\frac{1}{4}$	16 23 $\frac{3}{4}$		
♀ — 26.	N. 36 E.	143		45 36	11 52	14 22 $\frac{7}{8}$	13 57 $\frac{3}{8}$	14 2 $\frac{3}{8}$		
♂ — 27.	N. 46 E.	158 $\frac{1}{2}$	47 16	47 16 $\frac{1}{4}$	9 5	11 27 $\frac{3}{8}$	11 1 $\frac{7}{8}$	11 7 $\frac{3}{8}$		
♀ — 28.	N. 59 E.	114 $\frac{1}{2}$	48 15 $\frac{1}{4}$	48 9 $\frac{1}{2}$	6 40	8 58	8 32 $\frac{1}{2}$	8 38 $\frac{1}{2}$		
♂ — 29.	N. 57 $\frac{1}{2}$ E.	176	49 43	49 37 $\frac{1}{2}$	2 55	5 9 $\frac{1}{4}$	4 43 $\frac{3}{4}$	4 50 $\frac{1}{4}$		

* * In the preceding Journal, the course and distance put down in the second and third columns are those made good for the whole day; the variation of the compass, and common quantity of lee-way, under the circumstances the ship then was, being only allowed for; currents, and heave of the sea, as it is usually called, being not taken into the account, except for a few weeks after we left England. These things, I conceived, would be determined with greater certainty, both as to quantity and quality, by comparing the reckoning, kept entirely without them, with those deduced from Observations, and the Watch, or Time-keeper made by Mr. Kendall: Indeed, I did not see how otherwise to make my dead reckoning account of any real use, as my judgment, in making allowance for these things, could not have the least weight even to confirm that of such skilful and experienced navigators as Captain Cook, Mr. Gilbert, and other Officers of the Resolution. It therefore became my business to endeavour at making my labours useful, though in a less degree, by adopting a different plan; and am willing to hope I have done it with some success, especially as I was very careful in observing, as often as possible, both the variation of the compass, and the lee-way which the ship made, from time to time. I have also endeavoured to distinguish between what was effected by a current, and what was the effect of a swell, by mentioning the latter, as often as one was observed, and the point of the compass towards which it set, in a small column on the right hand side of the page.

The fourth and sixth columns contain the latitude and longitude of the ship, deduced from the above-mentioned course and distance, on the noon of the civil day; or that where the nautical day ends, and the astronomical day begins: The latitude, so computed, is only carried on from observation to observation; that is, in general, only from noon to noon, as I always took the

latitude observed the day before, when I had one, for the latitude departed from; but the longitude is kept on, without any correction whatsoever, from one place to the next where we anchored, and stopped long enough for me to determine the longitude properly, or where it had been well settled before by other persons. The fifth column contains the observed latitude when there was an observation; and when there was not, the latitude determined, in the best manner I could, by the log and subsequent observations. Those latitudes which were actually observed, may be readily known by turning to the Observations, page 223 to page 280.

Columns seven and eight contain the longitudes of the ship, as shewn by Mr. Kendall's Watch, and Mr. Arnold's (N^o. 3.), until Mr. Arnold's Watch stopped, after which that column is discontinued. The last column but two exhibits the longitude resulting from the last lunar observation, carried on to the time by Mr. Kendall's Watch; except from our leaving England to the 13th of September, 1772, when it was carried on by the log, the disadvantage of which was soon discovered; and the last but one contains, what is esteemed to have been, the true longitude of the ship each day at noon, and also the longitudes of all the lands we saw in the voyage, as well as of the more remarkable Capes, Headlands, and Bays in them; the general method of deducing which was as follows:

I reduced all the longitudes resulting from the observations of the Moon's distance from the Sun and fixed Stars made between the times of new and full Moon, to the time of the full Moon, by means of Mr. Kendall's Watch, and took the mean: I reduced, in like manner, all the observed longitudes taken between the full and change, to the same time, and took the mean of these also: the mean of these two means were taken for the true longitude of the ship at that time. In the same manner were all the longitudes observed between the full and change, and also between the change and next full moon, reduced to the time of the change, and their mean taken for the true longitude of the ship at that time: and in this manner was the longitude of the ship ascertained, once a fortnight, generally by a mean of 30 or 40, and sometimes even 50 and 60 observations. The longitudes in the intermediate times were deduced from these by means of the Watch. In some instances, indeed, where I have had sufficient reasons, the longitudes are taken from the Watch itself, as in our run from the Cape of Good Hope to the Island of St. Helena, although the observations would at all times have given the same longitude within a very few miles, as will readily be seen; and I have also paid proper regard to the situations of places settled by those who have gone before me, where the authorities were such as could be depended on.

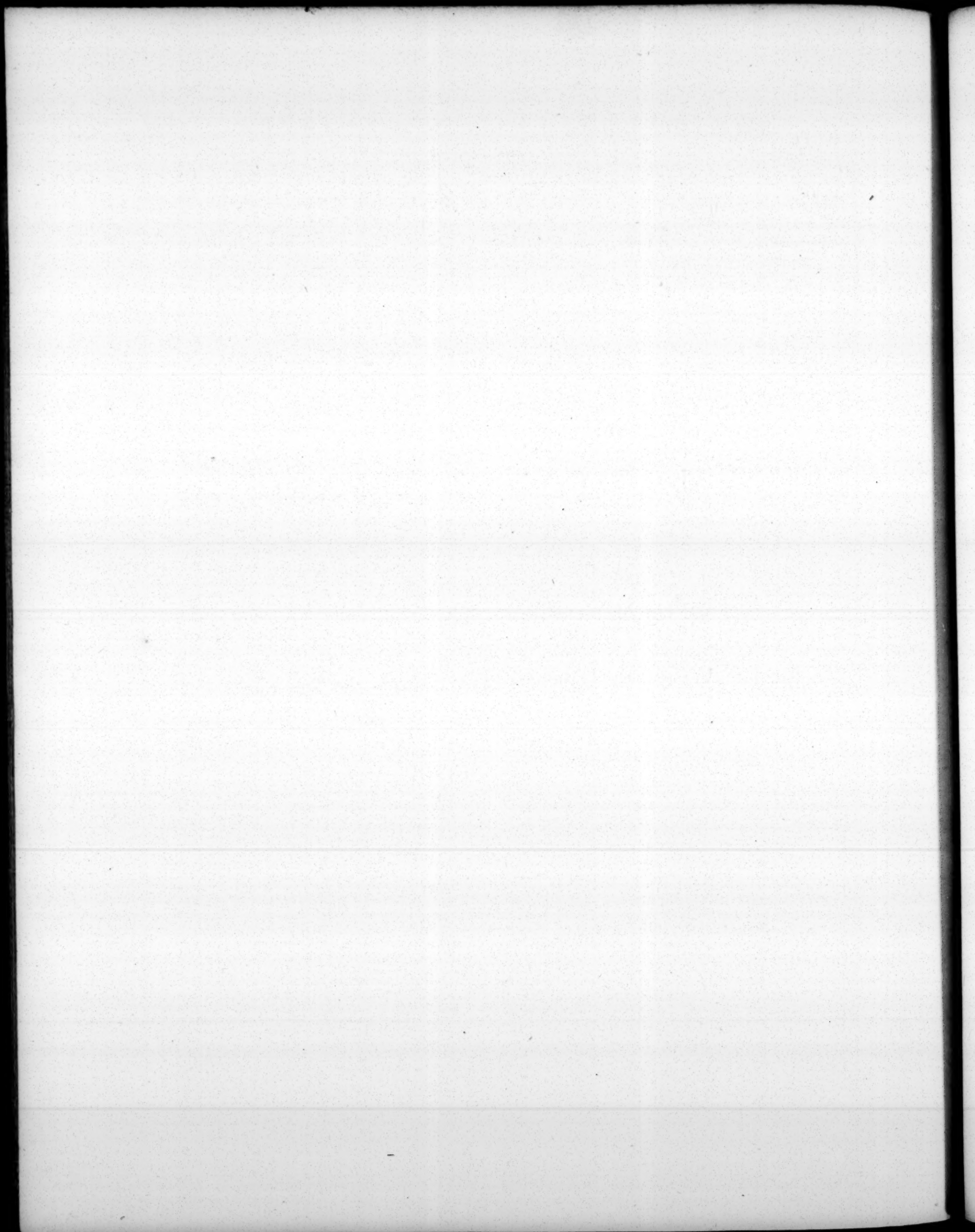
Lastly, I have to observe that the length of the log-line was carefully kept, by frequent comparisons, to such proportion with the half-minute glass, as $49\frac{1}{4}$ feet have to 30 seconds.

METEOROLOGICAL OBSERVATIONS,

M A D E

On Board His MAJESTY'S Sloop RESOLUTION,

In her late Voyage on DISCOVERIES towards the SOUTH.



1772.	Morn.		Noon.		Even.	Winds.	Weather, &c.
	Therm.	Barom.	Therm.	Therm.	Therm.		
○ June 21.						S. W.	Moderate wind, clear, and hot weather.
☾ — 22.							Almost calm, and very hot.
♂ — 23.						Easterly.	Light breezes, flying clouds, and very hot.
♀ — 24.						Southerly.	Brisk wind, and flying clouds.
☿ — 25.						Variable.	Little winds, and ditto.
♀ — 26.						Ditto.	Light breezes, and ditto.
♂ — 27.						Westerly.	Ditto.
○ — 28.						Variable.	Little wind, and cloudy weather.
☾ — 29.						Ditto.	Ditto, and thin clouds.
♂ — 30.						Northerly.	Light breezes, and hazy weather.
♀ July 1.						Ditto.	Ditto.
☿ — 2.	56 $\frac{1}{4}$					Ditto.	Ditto, and fine weather.
♀ — 3.							Cloudy, with showers.
☾ — 13.	61	30,31	61 $\frac{1}{2}$			Westerly.	Moderate wind, and cloudy, with rain at times.
♂ — 14.	60 $\frac{1}{4}$	3,29	62	63		Ditto.	Little wind, and foggy weather.
♀ — 15.	59		64			N. N. E.	Moderate wind, and cloudy weather.
☿ — 16.	61 $\frac{1}{2}$	30,18	61 $\frac{1}{2}$	63		N. W.	Ditto, and fine weather.
♀ — 17.	63 $\frac{1}{2}$		70	70		S. W.	Brisk wind, and hazy.
♂ — 18.	64		65			N. W.	Squally, with clouds, and rain at times.
○ — 19.	63	30,05	64 $\frac{1}{2}$			N. W.	Brisk wind, and cloudy.
☾ — 20.	63	29,97	66			Variable.	Ditto, and foggy, with rain.
♂ — 21.	60	30,08	66			S. W.	Little wind, and hazy weather.
♀ — 22.			65 $\frac{1}{2}$	69		North.	Ditto.
☿ — 23.			64 $\frac{1}{2}$			N. E.	Brisk wind, and flying clouds.
♀ — 24.	65 $\frac{1}{2}$		66 $\frac{1}{4}$			Ditto.	Ditto.
♂ — 25.	67 $\frac{1}{4}$	30,3	70	73		Ditto.	Ditto, and cloudy.
Tried Dr. Lind's wind gage, (See Philosoph. Transact. vol. lxx. p. 343.) but could not find that the wind had any sensible effect on it. At the time we had as much wind as we could well carry top-gallant fails to.							
○ — 26.	68 $\frac{1}{4}$	30,2	72 $\frac{1}{2}$	74		N. E.	Moderate wind, and cloudy.
☾ — 27.	69 $\frac{1}{2}$		72	71		Variable.	Ditto, and fine weather.
♂ — 28.	72 $\frac{1}{2}$	30,1	72 $\frac{1}{2}$	74		Ditto.	Very little wind, and fine weather.
♀ — 29.	72	30,18	77 $\frac{1}{2}$			Ditto.	Little wind, showers, and fine weather.
☿ — 30.			76			Ditto.	Moderate wind, and hot weather.
♀ Aug. 31.			72 $\frac{1}{2}$			Ditto.	Ditto, and showers, with flying clouds.
♂ — 1.			72 $\frac{1}{2}$			Ditto.	Brisk wind, and flying clouds.
○ — 2.			75 $\frac{1}{2}$			N. E.	Ditto, and cloudy, with showers.
☾ — 3.	73	30,13	77			Ditto.	Ditto, and cloudy.
♂ — 4.	72	30,08	75	76 $\frac{1}{2}$		Variable.	Moderate wind, and very hazy.
♀ — 5.	75 $\frac{1}{2}$	30,1	76	77 $\frac{1}{2}$		East.	Ditto, and foggy.
☿ — 6.	74	30,1	78	78 $\frac{1}{2}$		N. E.	Ditto, and cloudy.
♀ — 7.	74 $\frac{1}{2}$	30,15	79	79 $\frac{1}{2}$		East.	Ditto.
♂ — 8.	73	30,1	79			N. E.	Moderate wind, and hazy.
○ — 9.	76	30,08	78			Ditto.	Brisk wind, and cloudy.
☾ — 10.	75 $\frac{1}{2}$	30,05	79			Ditto.	Ditto, and hazy weather.
♂ — 11.	78	30,0	82			N. E. by N.	Moderate wind, and hazy.
♀ — 12.	80	30,02	80			Ditto.	Ditto, and showers.
☿ — 13.		30,08	82	83 $\frac{1}{2}$		N. E.	Ditto, and fine weather.

1772.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
♀	Aug. 14.	79	30,12	81		N. E.	Moderate wind, and fine weather.
h	— 15.	78½	29,92	80½		N. E. by N.	Brisk wind, with rain.
To-day we lost the N. E. trade-wind, which veered round, by the E. to the S. E. without flattening to a calm, as I believe is generally the case.							
○	— 16.	80	29,92	81		South.	Moderate wind, and hazy weather.
∅	— 17.	79	29,92	80		S. W.	Ditto, and cloudy.
♂	— 18.	78	30,0	82		Ditto.	Little wind, and very hazy.
♀	— 19.	80	30,07	81	81	N. W.	Moderate wind, and cloudy, with showers.
∅	— 20.	79	29,97	79½		S. W.	Little wind, and exceeding heavy rain.
♀	— 21.	76½	29,9	79	79½	Ditto.	Squally, with rain.
h	— 22.	78	30,02	80		Ditto.	Brisk wind, and cloudy.
○	— 23.	80	30,0	80	80½	Ditto.	Moderate wind, and cloudy.
∅	— 24.	78	29,95	79		Ditto.	Ditto.
♂	— 25.	79½	30,05	80½	80½	Ditto.	Moderate wind, and hazy.
♀	— 26.	78	29,92	76½		Ditto.	Ditto, and cloudy, with showers.
∅	— 27.	78	29,97	80½		Ditto.	Ditto, and hazy.
♀	— 28.	77½	30,10	77		Ditto.	Ditto, and fine weather.
h	— 29.	77	30,2	78	79½	Ditto.	Ditto.
○	— 30.	76	30,02	77		South.	Ditto.
∅	— 31.	76½	30,07	78½		Ditto.	Ditto.
♂	Sept. 1.	77	30,0	79		Ditto.	Ditto.
♀	— 2.	76	29,92	78		Ditto.	Ditto, and cloudy.
∅	— 3.	75½	30,05	76		Ditto.	Ditto.
♀	— 4.	74	30,05	75		Variable.	Ditto, and fine weather.
h	— 5.	73½	30,04	76		S. W.	Ditto.
This morning I let down a Thermometer, suspended in the middle of a strong wooden case, of such a construction as to let the water pass freely through it in its descent, but which shut close the instant it began to be drawn up. By this means the Thermometer was brought up in a body of water of the same heat with that it had been let down to. The Thermometer stood at 75½ in the open air, at 74 in the water at the surface, and at 66 when drawn up from the depth of 85 fathoms, where it had lain 20 minutes, and we were seven and a half drawing it up.							
○	— 6.	74½	30,0	75		South.	Moderate wind, and fine weather.
∅	— 7.	75	30,07	77		Ditto.	Ditto.
♂	— 8.	75½	30,1	76		Ditto.	Ditto.
♀	— 9.	74½	30,1	75		S. E.	Ditto.
∅	— 10.	74½	30,05	75		Ditto.	Ditto.
♀	— 11.	74	30,12	76		Ditto.	Ditto.
h	— 12.	75½	30,1	76½		Ditto.	Ditto.
○	— 13.	74	30,1	76		Ditto.	Moderate wind, and cloudy.
∅	— 14.	75	30,15	76½	77	Ditto.	Ditto, and fine weather.
♂	— 15.	73	30,02	77		Ditto.	Ditto, and cloudy.
♀	— 16.	73	30,17	73		Ditto.	Ditto.
∅	— 17.	72½	30,17	73½		Ditto.	Ditto.
♀	— 18.	73	30,15	73½		Ditto.	Squally, with rain sometimes.
h	— 19.	70½	30,17	72½		Ditto.	Brisk wind, and cloudy, with showers.
○	— 20.	72	30,22	72½		Ditto.	Moderate wind, and fine weather.

1772.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
D	Sept. 21.	71	30,12	71		S. E.	Moderate wind, and fine weather.
♂	— 22.			75		Ditto.	Ditto.
♀	— 23.	70	30,27	73		Ditto.	Squally, with clouds, and rain at times.
♂	— 24.	70½	30,3	72		Ditto.	Moderate wind, and cloudy.
♀	— 25.		30,3	70½		East.	Brisk wind, and cloudy, with showers.
♂	— 26.	69	30,35	73	73½	Ditto.	Little wind, and fine weather.
The Thermometer stood at 72½ in the open air, at 70 in the water at the surface, and at 68 when drawn up from a depth of 80 fathoms, where it had lain 15'; and we had been seven minutes drawing it up.							
⊙	— 27.	69½	30,32	74		East.	Little wind, and fine weather.
D	— 28.	69	30,25	72		N. E.	Ditto.
♂	— 29.	67	30,22	71		North.	Moderate wind, and fine weather.
♀	— 30.	69½	30,12	71½	67½	Variable.	Brisk wind, and cloudy.
♂	Oct. 1.			71		South.	Moderate wind, and flying clouds.
♀	— 2.	65½		65½		S. W.	Ditto.
♂	— 3.	63½	30,3	67½		Ditto.	Brisk wind, and cloudy.
⊙	— 4.	62½	30,15	62		Variable.	Moderate wind, and cloudy.
D	— 5.	59	30,41	61		S. E.	Ditto, with drizzling rain.
♂	— 6.		30,4	61½		East.	Ditto, and cloudy.
♀	— 7.	58½	30,42	60½		Ditto.	Squally, unfettered weather.
♂	— 8.	59	30,4	62		Ditto.	Brisk wind, and cloudy, with rain.
♀	— 9.	59	30,4	61		N. E.	Brisk wind in squalls, and very hazy.
♂	— 10.	59	30,37	62		Ditto.	Moderate wind, and hazy: showers.
⊙	— 11.	59½	30,25	63½		Ditto.	Moderate wind, and fine weather.
The Thermometer stood at 60½ in the open air, at 59 in the water at the surface, and at 57 when drawn up from the depth of 100 fathoms; where it had lain 20', and we had been six drawing it up.							
D	— 12.		30,35	63		N. E.	Little wind, and fine clear weather.
♂	— 13.	60	30,27	65½		Ditto.	Moderate wind, and cloudy.
♀	— 14.	61	30,1	61		North.	Ditto.
♂	— 15.	58	30,02	62		Ditto.	Moderate wind, and fine weather.
♀	— 16.	59	30,05	61		West.	Brisk wind, and foggy weather.
♂	— 17.	57	30,05	59		S. W.	Ditto, and flying clouds.
⊙	— 18.		30,1	60½		Variable.	Moderate wind, and cloudy.
D	— 19.	54½	30,17	57	58	East.	Little wind, and cloudy.
♂	— 20.		30,35	62½		Ditto.	Ditto, and clear weather.
♀	— 21.	60½	30,37	63		Ditto.	Ditto.
♂	— 22.	58	30,2	60	61	N. E.	Little wind, and cloudy, with rain at times.
♀	— 23.	58	29,95	63		West.	Little wind, and cloudy.
♂	— 24.	56	30,07	59		South.	Brisk wind, and fine weather.
⊙	— 25.	54	30,17	58		S. E.	Moderate wind, and cloudy.
D	— 26.	58	30,07	60		Ditto.	Ditto.
♂	— 27.	59	29,9	60½		Variable.	Moderate wind, and hazy weather.
♀	— 28.	64	29,9	67		N. W.	Little wind, and cloudy.
♂	— 29.		29,81	61½		North.	Moderate wind, with drizzling rain.
♀	— 30.	61	29,83	60½		N. W.	Cloudy, with rain at times.
♂	— 31.					Ditto.	Brisk wind, and cloudy weather.

1772.		Morn.		Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.			
○	Nov. 1.			63			N. W.	Brisk wind, and cloudy, with showers.
☾	2.			61½			N. W.	Ditto, and mostly cloudy.
☼	3.			60½			N. W.	Moderate wind, and fair weather.
☼	4.		30,34	61½			Variable.	Ditto, and variable weather.
☾	5.		30,24	65			Southerly.	Ditto.
☼	6.		30,19	66			Ditto.	Moderate wind, and fine weather.
☾	7.	66½	30,17	71	66		Ditto.	Brisk wind, and squally weather.
○	8.	62	30,14	68	63½		N. W.	Little wind, and flying clouds.
☾	9.	62½	30,15	64	63½		N. W.	Moderate wind, and flying clouds.
☼	10.	59½	30,3	62½	60		Variable.	Little wind, and fine weather.
☼	11.	59	30,22	64½			N. W.	Moderate wind, and cloudy weather.
☾	12.	62½	30,24	65	61		N. W.	Ditto, and fine weather.
☼	13.	63	30,26	64½	65		N. W.	Ditto.
☾	14.	60½	30,33	65½	63½		Variable.	Ditto.
○	15.	58½	30,19	66			Ditto.	Ditto.
☾	16.						Ditto.	Ditto.
☼	17.			68			N. N. E.	Ditto.
☼	18.		30,02	71			Variable.	Moderate wind, and cloudy.
☾	19.		29,95	69½			S. S. E.	Brisk wind, and cloudy.
☼	20.		29,9	71½			N. W.	Ditto.
☾	21.		29,97	72			N. W.	Little wind, and fine weather.
○	22.			72	72		N. W.	Moderate wind, and cloudy.
☾	23.	62	29,8	65			Variable.	Brisk wind, and cloudy, with showers.
☼	24.	62	30,1	63½			S. E.	Moderate wind, and clear weather.
☼	25.	62	30,0	64			S. E.	Brisk wind, and cloudy.
☾	26.	66½	29,8	69½			West.	Moderate wind, and cloudy.
☼	27.	53	30,02	52½			Variable.	Ditto, and flying clouds.
☾	28.	54½	29,85	59½			N. W.	Strong wind in squalls, with rain.
In the midst of this heavy gale I tried Dr. Lind's Wind-gage, and the water in it was depressed by the force of the wind $\frac{4.5}{100}$ of an inch.								
○	29.	52½	29,6	51			N. W. b. W.	Strong wind, and squally, with hail and rain.
☾	30.	52	29,62	55			N. W. b. W.	Strong wind in squalls, and rain.
The water in Dr. Lind's Wind-gage depressed $\frac{4.5}{100}$ of an inch in the squalls.								
☼	Dec. 1.	52	29,23	51	47		Westerly.	Strong wind, and cloudy, with rain.
Dr. Lind's Wind-gage sunk $\frac{4}{100}$ of an inch in the squalls.								
☼	2.	46	29,3	49½	48		N. W.	Strong wind, and foggy weather.
☾	3.	47½	29,22	49			N. W.	Brisk wind, and flying clouds.
☼	4.	43½	29,55	44½			N. W.	Moderate wind, and hazy.
☾	5.	50½	29,7	48			Variable.	Brisk wind, and hazy.
○	6.	38½	29,52	38			Variable.	Strong wind, and cloudy.
☾	7.	38½	28,6	42½			N. W.	Exceeding strong wind, with rain.
☼	8.	37½	28,92	40	37½		West.	Ditto, and cloudy, with snow and fleet. Penguins.
☼	9.	35	29,32	36	32		West.	Strong wind, and cloudy. At ½ past 10 in the evening, some water which had been spilled on the deck was frozen, and in the morning we passed the first island of ice. It was not very high, was smooth on the top and sides, and not rugged like those I have seen in the North seas.
☾	10.	34	29,32	36½			Variable.	Brisk wind, with snow and fleet.
☼	11.	32½	29,27	34			N. W.	Ditto. Passed another ice isle.

1772.	Morn.		Noon.		Even.	Winds.	Weather, &c.
	Therm.	Barom.	Therm.	Therm.	Therm.		
h Dec. 12.	34	28,55	34 $\frac{1}{2}$			N. W.	Brisk wind, with snow and fleet. Many ice islands.
o — 13.	30 $\frac{1}{2}$	28,7	32			S. W.	Ditto. Penguins and ice.
d — 14.	31	29,17	33			Northerly.	Went in the boat to try the heat of the sea-water, and found that a thermometer which stood at 32 $\frac{1}{2}$ in the open air, stood at 30 in the water at the surface, and at 34 when drawn up from the depth of 100 fathoms, where it had lain 17', and we were 5 $\frac{1}{2}$ drawing it up. While we were doing this, so thick a fog came on, that it was with the utmost difficulty, and after some considerable time, that we found the ships again.—Much ice.
8 — 15.	30	28,57	32			N. W.	Little wind, with fog and snow. Ice, whales, and peng
8 — 16.	31	28,7	31 $\frac{1}{2}$			N. W.	Little wind, fog and snow. Much ice.
u — 17.	32	29,3	33 $\frac{1}{2}$			N. W.	Mod. wind, and cloudy, with fleet. Ice, whales, seals, &c.
9 — 18.	30 $\frac{1}{2}$	29,4	31			N. W.	Brisk wind and thick fog. Many ice islands.
h — 19.	31	29,12	31 $\frac{1}{4}$	31 $\frac{1}{2}$		Variable.	Mod. wind, and foggy. Many large ice isl.
o — 20.	33	29,05	34	33		N. W.	Brisk wind, with snow. Some ice islands.
d — 21.	32 $\frac{1}{2}$	29,05	33 $\frac{1}{2}$	34 $\frac{1}{2}$		N. W.	Brisk wind, and hazy. Several ice islands.
8 — 22.	32 $\frac{1}{2}$	29,2	33			S. W.	Moderate wind, and cloudy. A thermometer which stood at 33 in the open air fell to 32 in the water at the surface, and stood at 34 $\frac{1}{2}$ when drawn up from the depth of 100 fathoms, where it had been 16', and we were 6 $\frac{1}{2}$ drawing it up.—Many ice islands.
8 — 23.	33	29,65	34			N. W.	Mod. wind, and cloudy, with snow. Some ice.
u — 24.	32 $\frac{1}{2}$	29,4	35			Variable.	Little wind, and cloudy. Ice.
9 — 25.	31 $\frac{1}{2}$	29,05	32 $\frac{1}{4}$			South.	Moderate wind, and cloudy. Some ice.
h — 26.	30 $\frac{1}{2}$	29,15	31 $\frac{1}{2}$	32		S. W.	Brisk wind, and cloudy. Much ice.
o — 27.	33 $\frac{1}{2}$	29,45	36			East.	Little wind, and cloudy. Whales, peng. & ice.
d — 28.	33	29,07	35			East.	Brisk wind, and cloudy. No ice seen.
8 — 29.	31 $\frac{1}{4}$	29,2	36			Variable.	Mod. wind, with snow. Many peng.; some ice.
8 — 30.	33 $\frac{1}{2}$	29,07	36 $\frac{1}{2}$			S. E.	Little wind; snow and fleet. Seals and peng.
u — 31.	31	29,0	31 $\frac{1}{2}$	31		S. E.	Brisk wind, and cloudy. Pengu. seals, &c.
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9 Jan. 1.	31	28,95	31 $\frac{1}{2}$	31		S. W.	Brisk wind, with fleet. Some ice and peng.
h — 2.	31	29,55	32			Variable.	Brisk wind, and cloudy. Whales, peng. & ice.
o — 3.	31	29,37	31			N. E.	Brisk wind; snow and fleet. The rigging so cumbered with ice, that the ship was worked with the utmost difficulty, and many people were hurt by its falling.
d — 4.	32	29,5	33	33		N. W.	Brisk wind, with fleet. The rigging still loaded with ice.
8 — 5.	33 $\frac{1}{2}$	29,4	34			N. W.	Brisk wind, and cloudy. One ice island only.
8 — 6.	33 $\frac{1}{4}$	29,17	34 $\frac{1}{2}$			N. W.	Ditto. Few ice islands.
u — 7.	34	29,07	35			N. W.	Brisk wind; snow and fleet. One ice island.
9 — 8.	33 $\frac{1}{4}$	29,12	34 $\frac{1}{4}$			N. W.	Mod. wind, and cloudy. Several ice islands.
h — 9.	33 $\frac{1}{2}$	29,22	35			N. W.	Light breezes, and cloudy, with snow at times. Took up a great quantity of ice to melt for water. That water melted from the ice usually found floating in the sea is fresh and good, is no new discovery. The Hudson's Bay ships have long made use of it; and I have mentioned it, from my own experience, in the account of a Voyage to Hudson's Bay. See Phil. Transf. vol. lx. for the year 1770.
o — 10.	31 $\frac{1}{2}$	29,25	34			North.	Mod. wind, and cloudy, with snow at times.
d — 11.	34	29,27	35 $\frac{1}{2}$			East.	Ditto, and cloudy. Several ice islands.

1773.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
♂	Jan. 12.	35	29,20	35		S. S. W.	Moderate wind, and cloudy, with snow. Took up more ice for water. A thermometer which stood at 37 in the open air, stood at 33½ in the water, at the surface, and at 32 when drawn up from 100 fathoms below it. Whilst we were waiting for the boats, many large pieces were broke off by the sea from a very large Ice Island which was near us, so that it is plain those huge masses of Ice can exist but for a short time.
♀	— 13.	34½	29,3	38		S. E.	Calm: Cloudy, with snow. Some Ice Isl.
♂	— 14.		29,17	35½		S. E.	Little wind, and cloudy. Some Ice Islands.
♀	— 15.	35	29,07	42	34½	S. E.	Little wind, with snow at times.
♂	— 16.	34	29,05	35	34½	S. E.	Brisk wind, and cloudy, with fleet.
⊙	— 17.	33½	29,1	34		S. E.	Brisk wind, and foggy. Tacked from a very large, and apparently firm field of ice, amidst an amazing number of very large Ice Islands.
♂	— 18.	32	28,95	34½	33	S. E.	Brisk wind, with fleet. Little ice.
♂	— 19.	35	29,1	35	34½	S. E.	Brisk wind, and cloudy. Few Ice Islands.
♀	— 20.	33½	28,67	33½	33½	S. E.	Ditto. Several Ice Islands.
♂	— 21.	35	28,55	35½	35½	S. W.	Moderate wind, snow and fleet. Several Ice I.
♀	— 22.	35½	28,95	37½		S. W.	Moderate wind, with fleet. The two time-keepers being put one on each side of the great cabin, I put a thermometer by each, and before a fire was kept in the cabin, I never saw them differ more than half a degree; but since there has been a fire, I have constantly found that thermometer highest, which happened to be on the weather side, sometimes by 3°, whereas one would naturally have expected it to have been just the contrary. Much ice.
♂	— 23.	35	29,02	36½	35½	S. W.	Brisk wind: Hail, snow and fleet. Some ice.
⊙	— 24.	34½	29,27	34½	34½	N. E.	Brisk wind, and cloudy. Several Ice Islands.
♂	— 25.		28,85	36½	35	S. E.	Brisk wind, and foggy. Little ice.
♂	— 26.	34	28,27	35	35½	S. W.	Little wind; foggy, with rain. No ice.
♀	— 27.	35½	28,9	35	36	N. W.	Little wind, and flying clouds. Some Ice I.
♂	— 28.	38	29,42	36½	36¾	N. W.	Brisk wind, with fleet, snow and rain. Several Ice Isl.
♀	— 29.	37	29,65	38	37½	North.	Strong wind, with rain, and very thick fog.
♂	— 30.	38½	29,57	39½	40	N. W.	Strong wind, with thick fog, and rain.
⊙	— 31.	38	29,55	38¾	39	N. W.	Strong wind, and cloudy. Some ice.
♂	Feb. 1.	40½	29,95	41½	40	N. W.	Brisk wind, and cloudy. Penguins and divers.
♂	— 2.	43	29,92	45½	46½	North.	Brisk wind, and foggy, with rain at times.
♀	— 3.	43½	29,8	46	46	N. W.	Moderate wind, and hazy. Sea-weed & div.
♂	— 4.	42½	29,65	45	43¾	N. W.	Moderate wind, and cloudy.
♀	— 5.	40	29,6	41	41	N. W.	Ditto.
♂	— 6.	43	29,47	43½	44½	N. W.	Brisk wind, and drizzling rain.
⊙	— 7.	44	29,7	44	45	N. E.	Brisk wind, and cloudy.
♂	— 8.	40	29,25	43½		N. E.	Brisk wind, and thick fog: Rain at times. Penguins.
♂	— 9.	43½	28,85	45		N. W.	Strong wind, and foggy, with rain. Peng.
♀	— 10.	40	29,45	41½	41	N. W.	Strong wind, and cloudy.
♂	— 11.	40	29,17	40		N. W.	Brisk wind, with rain. Many penguins.
♀	— 12.		29,55	38	38	S. W.	Brisk wind, and clear weather. Many peng.
♂	— 13.	35	29,6	36	38¾	West.	Ditto. Many penguins.
⊙	— 14.	35½	29,37	35½	36	S. W.	Moderate wind, snow and fleet. Saw a seal.
♂	— 15.	35	29,4	36½	36½	S. W.	Brisk wind, and cloudy. Several seals.
♂	— 16.	35	29,5	34		East.	Little wind, with snow. Mr. Pickersgill saw south. lights.

1773.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
8	Feb. 17.	33 $\frac{1}{2}$	29,02	35		S. S. W.	Moderate wind, and cloudy, with snow. About one o'clock in the morning Mr. Clerke, who had the watch, told me that the same appearance which Mr. Pickersgill had seen the night before was very bright. I got up, and found it to be the very same phenomenon which we call the Northern Lights in England. The natural state of the heavens, except in the S. E. quarter, and for about 10° of altitude all round the horizon, was a whitish haze, through which stars of the third magnitude were just discernable. All round, the horizon was covered with thick clouds, out of which arose many streams of a pale reddish light, that ascended towards the zenith. These streams had not that motion which they are sometimes seen to have in England; but were perfectly steady, except a small tremulous motion which some of them had near their edges. Took up ice for water.
4	— 18.	32	29,12	33	33	S. W.	Moderate wind, and cloudy. Several Ice Isl.
8	— 19.	33 $\frac{1}{2}$	29,2	35	33 $\frac{1}{2}$	S. W.	Brisk wind, and squally, with snow at times. Many large Ice Islands. In the night the southern lights were very bright at times, and the colours much more various and vivid than they were on Wednesday night, their motion also was greater, so that on the whole they were extremely beautiful.
6	— 20.	32 $\frac{1}{2}$	29,3	35		W. S. W.	Moderate wind, and hazy. Many large Ice Islands, and a strong appearance of land to the westward, which proved only a fog-bank. At nine o'clock in the evening the southern lights sprung up very bright about the east point of the horizon, in a single steady pillar, of a pale reddish light. Its direction was not directly towards the zenith, but gradually deflected towards the south, and grew fainter as it ascended, so as to vanish about S. E. and at 45° of altitude.
0	— 21.	34 $\frac{1}{4}$	29,42	36 $\frac{1}{4}$		N. E.	Little wind, with snow. Many Ice Islands.
D	— 22.	45 $\frac{1}{2}$	28,82	34		S. E.	Ditto.
8	— 23.	34	28,72	35	33 $\frac{1}{2}$	S. E.	Strong wind, with snow, and so thick a fog, at times, that we could scarcely see a ship's length, and at the same time were surrounded with a prodigious number of very large islands of ice. In the morning I saw one burst, in an instant, into three large, and a great many small pieces. It made no report, or at least so small a one that we could not hear it for the noise of the sea, and the whistling of the wind in the rigging.
8	— 24.	34	28,55	35	35	Variable.	Strong wind, with fleet. Many large Ice Isl.
4	— 25.	35	29,0	36 $\frac{1}{2}$	36 $\frac{1}{4}$	N. E.	Little wind, and cloudy, with snow. Several Ice Islands.
8	— 26.	35	29,1	36 $\frac{1}{4}$	33	South.	Little wind, and cloudy. Saw the South. lights.
6	— 27.	34	28,42	34 $\frac{1}{2}$		S. W.	Strong wind, with fleet. Whales and ice.
0	— 28.	35 $\frac{1}{4}$	29,0	36 $\frac{1}{2}$		Variable.	Strong wind, and foggy. Porpoises and ice.
D	March 1.	35	28,35	35 $\frac{1}{2}$	36 $\frac{1}{4}$	N. E.	Brisk wind, with snow. Several Ice Islands.
8	— 2.	37	28,55	38		S. W.	Little wind, thick fog, and rain.
8	— 3.	36	29,05	38		Variable.	Little wind, and foggy. Several penguins.
4	— 4.	35 $\frac{1}{2}$	28,82	36		N. W.	Brisk wind, with snow and rain.
8	— 5.	36	28,87	37 $\frac{1}{4}$		S. E.	Moderate wind, and foggy, with rain. Many islands of ice. One in particular, which we passed in the afternoon, was near a mile and half long, and very high: It was calm most part of the night, so that we found ourselves very near it in the morning, but observed that several very large pieces had broke off from it. Many great reports, like thunder, were heard in the night, which I conceive were occasioned by these pieces breaking off.

1773.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
♀ March	5.	An almost universal dissolution began, about this time, to take place among these vast, and, to us, tremendous bodies of frigid matter. One large Ice Island.					
h	6.	36 $\frac{1}{2}$	28,95	37	37	Variable.	Moderate wind, and cloudy. Saw the southern lights.
o	7.	35 $\frac{1}{4}$	28,57	34 $\frac{1}{2}$		South.	Little wind, with fleet. Saw the South. lights.
D	8.	35 $\frac{1}{4}$	28,92	40		S. E.	Little wind, and cloudy.
♂	9.	36 $\frac{1}{2}$	28,62	37	35	S. W.	Strong wind, and squally, with rain and fleet.
♀	10.	33	29,0	35		Variable.	Brisk wind, and cloudy. Saw sea-weed.
u	11.	35	29,15	37		East.	Moderate wind, with snow and fleet.
♀	12.	37 $\frac{1}{2}$	28,97	39 $\frac{1}{2}$	37	S. E.	Moderate wind, with drizzling rain.
h	13.	35	28,7	36 $\frac{1}{4}$	35	Variable.	Moderate wind. Snow and rain.
o	14.	31 $\frac{1}{2}$	28,87	33		S. W.	Brisk wind. Snow and rain.
D	15.	31 $\frac{3}{4}$	28,85	34		Westerly.	Moderate wind, and cloudy. The southern lights very bright at times, and exceeding beautiful: Their colours being vivid, and their motion quick and curious.
♂	16.	33 $\frac{1}{4}$	29,12	35 $\frac{1}{2}$	36	S. S. W.	Brisk wind, and squally, with snow.
♀	17.	34	29,45	35 $\frac{1}{2}$		N. W.	Brisk wind, and cloudy.
u	18.	39	29,82	41 $\frac{1}{2}$		West.	Brisk wind, with rain at times. A little after nine o'clock in the evening it was very clear, and the southern lights were exceeding bright and beautiful, and appeared of a semi-circular, or rainbow-like form, whose two extremities were nearly in the east and west points of the horizon. This bow, when it first made its appearance, passed a considerable way to the north of the zenith; but rose by degrees, turning, as it were, on its diameter, and passing through the zenith, settled at length, towards the southern horizon. These lights were at one time so bright, that we could discern our shadows on the deck.
♀	19.	41 $\frac{1}{2}$	29,82	43		N. W.	Brisk wind, and cloudy. Sea-weed, peng. and porpoises.
h	20.	45 $\frac{1}{2}$	29,75	45		West.	Strong wind, and hazy.
o	21.	45 $\frac{1}{2}$	29,95	46		N. W.	Brisk wind, and cloudy; saw seals & sea-weed.
D	22.	45 $\frac{1}{2}$	29,85	47		S. E.	Brisk wind, with showers.
♂	23.	47	30,17	49	49	Ditto.	Brisk, and cloudy.
♀	24.	50	29,95	52 $\frac{3}{4}$	54 $\frac{1}{2}$	Ditto.	Mod. wind, & foggy, with rain. Passed sea-weed, flicks, &c.
u	25.	52	29,85	54	52 $\frac{1}{2}$	Variable.	Brisk wind, and squally, with rain.
♀	26.	52	30,15	53 $\frac{1}{2}$		S. W.	Moderate wind, and fine weather.
h	27.	50	30,28	55		Westerly.	Ditto, with showers.
o	28.	55	30,38	56 $\frac{1}{2}$		N. W.	Ditto, and much rain.
D	29.		30,41	60		N. W.	Ditto, with frequent showers.
♂	30.		30,36	61		North.	Strong wind, and heavy rain.
♀	31.		30,14	62 $\frac{1}{2}$		North.	Moderate wind, with heavy showers.
u April	1.		30,03	61		N. W.	Ditto, and fine weather.
♀	2.		29,75	56 $\frac{1}{4}$		N. W.	Ditto, and showers.
h	3.		29,71	58		N. N. W.	Brisk wind, with drizzling rain.
o	4.		29,65	58		N. N. W.	Moderate wind, with some heavy showers.
D	5.	48	29,98	54		Variable.	Brisk wind, with heavy showers.
♂	6.	46 $\frac{1}{2}$	30,24	60 $\frac{1}{2}$	58 $\frac{1}{2}$	Ditto.	Moderate wind, with much rain.
♀	7.	49	30,39	52		Ditto.	Ditto, with constant heavy rain.
u	8.	48	30,22	50 $\frac{1}{2}$		Ditto.	Ditto, and rain without intermission.
♀	9.	51	30,04	52		Westerly.	Ditto.
h	10.	50	29,92	51 $\frac{1}{2}$		N. W.	Ditto.

1773.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
○	April 11.	48	30,13	54	53	Variable.	Little wind, with frequent showers.
☾	12.	47 $\frac{1}{2}$	30,20	50		Westerly.	} Little wind, and almost continued heavy rain.
♂	13.	50 $\frac{3}{4}$	30,18	58		Ditto.	
♀	14.	52 $\frac{1}{4}$	29,82	53		Ditto.	
☾	15.	50 $\frac{1}{2}$	29,99	53		Ditto.	
♀	16.	51	30,04	58	54 $\frac{3}{4}$	Ditto.	
☾	17.	55	29,90	56	56	Ditto.	} Little wind, and fine weather.
○	18.	53 $\frac{1}{2}$	29,95	58 $\frac{3}{4}$	57 $\frac{1}{2}$	Easterly.	
☾	19.	50 $\frac{1}{2}$	29,85	57 $\frac{1}{2}$		Ditto.	
♂	20.	50	29,77	57 $\frac{3}{4}$	56	Ditto.	
♀	21.	46 $\frac{1}{2}$	29,68	55	56	Ditto.	
☾	22.		29,67	53	45	Ditto.	Moderate wind, and heavy showers.
♀	23.		29,76	52 $\frac{1}{2}$		Westerly.	} Gentle breezes, with some showers.
☾	24.		29,82	53 $\frac{1}{2}$		Ditto.	
○	25.		29,95	33 $\frac{1}{4}$		Ditto.	Little wind, and fine clear weather.
☾	26.		29,88	51 $\frac{1}{2}$		N. E.	Moderate wind, with much rain.
♂	27.		30,02	50		N. W.	Ditto, with heavy showers.
♀	28.		30,25	47		Westerly.	Light breezes, and cloudy, with showers.
☾	29.		30,24	48 $\frac{3}{4}$		Ditto.	Ditto.
♀	30.		30,38			N. E.	Ditto.
☾	May 1.		30,39	50 $\frac{1}{2}$		Variable.	Ditto, with drizzling rain.
○	2.		30,42	51			Calm, with showers.
☾	3.		30,23	48			Calm, with continued heavy rain.
♂	4.		29,98	51 $\frac{1}{2}$		Variable.	Gentle breezes, with frequent showers.
♀	5.		29,96	46		S. W.	Ditto, with smart showers of rain.
☾	6.		30,42	51		N. W.	Moderate wind, with showers.
♀	7.		30,23	50 $\frac{3}{4}$		N. W.	Strong wind, thunder, lightning, hail & rain.
☾	8.		30,02	49 $\frac{1}{2}$		Variable.	Brisk wind, and flying clouds, with showers.
I had frequently to-day, an opportunity of viewing a very curious phænomenon; namely, the descent of the snow on the tops of the prodigiously high, and almost perpendicular hills which every where surrounded us. The atmosphere, in general, was pretty clear, except some very thick whitish clouds, which were continually flying over us. When these came near any hill, they began to extend themselves towards it, and were drawn out into a sort of conical form, the vertex of which was towards the hill. By degrees, the cloud gathered round the top of the hill, and entirely covered it; from which time the cloud grew visibly less dense, and in a little time was totally dispersed; when it appeared that all the part of the hill which had been immersed in the cloud was covered with snow.							
○	9.		30,35	49		N. E.	Brisk wind, and flying clouds.
☾	10.		30,01	53		N. E.	Ditto, with showers of hail and rain.
♂	11.		30,27	44 $\frac{1}{2}$		S. W.	Moderate wind, and flying clouds.
♀	12.	46	30,32	49		N. W.	Ditto, with showers.
☾	13.	53	30,3	55		S. W.	Brisk wind, and cloudy.
♀	14.	56	30,47	58		S. E.	Little wind, and hazy weather.
☾	15.	53	30,3	56		N. E.	Ditto.
○	16.	56	29,75	59		Westerly.	Brisk wind, in squalls, with rain.

1773.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
D	May 17.	51½	29,65			Southerly.	Moderate wind, and flying clouds. This afternoon we had an opportunity of observing, in as complete a manner as could be wished, one of the most curious, and perhaps the most extraordinary and powerful, of Nature's productions.
The forenoon had been in general pretty clear, but subject to heavy squalls of wind, and some flying clouds, which were very black and heavy, and moved with great velocity from the S. W. towards the N. E. (the direction of the wind). About four o'clock in the afternoon it became calm, and the heavens were almost covered with very black clouds, particularly towards the W. and N. W.; and presently after we saw several tail-like appearances, depending from the clouds in that quarter: These appearances were whiter than the clouds they hung from, which made them very conspicuous, and they increased gradually, in length, until they extended, as near as I could judge, about one-sixth part of the distance between the cloud and the surface of the sea. About this time, the water under them began to be violently agitated, and lifted up with a whirling motion towards the impending part of the cloud, which, on account of a motion they all had the contrary way to that the wind had blown, was not directly over it, but a little towards the S. W. As the water rose, the end of the cloud descended, and in a little time they joined; after which the water appeared to me to ascend out of the sea, into the cloud, with great velocity. I think that none of these spouts, as they are usually called, continued entire more than ten minutes: perhaps not quite so long. I saw four complete at one time; but there were great numbers which began to form, and were dispersed; by what cause I know not, before the cloud and water joined. One of them came, I was told, within 30 or 40 yards of the ship, which lay becalmed; but I was then below looking at the Barometer: when I got upon deck, it was about 100 fathoms from her. It is impossible to say what would have been the consequences if it had gone over her; but I believe they would have been very dreadful. At the time when this happened, the Barometer stood at 29,75 inches, and the Thermometer at 56°. The whole of this passed within the space of an hour, or thereabouts; for at five o'clock a small breeze of wind sprung up in the S. E. quarter, and dispersed every appearance of this kind, although the black clouds remained until about ten, when the wind veered round to the W. S. W. and settled there in a moderate, steady gale, and the weather cleared up. The annexed plate, N°. 4, was engraved from a drawing of Mr. Hodges, taken at the time; in which he has exhibited the appearance of one of them in three several states, and also the appearance of that which approached so near to the ship.							
♂	18.		29,57	49		S. W.	Little wind, and fine weather.
♀	19.		29,69	55		Ditto.	Ditto.
♂	20.		29,98			Northerly.	Moderate wind, and cloudy.
♀	21.		30,11	57		Variable.	Ditto, and mostly cloudy.
♂	22.		30,11	56½		Northerly.	Ditto, and cloudy.
⊙	23.	55	30,16	55½		S. W.	Little wind, and fine weather.
♂	24.	50	30,35	53	56	Westerly.	Brisk wind, and fine weather.
♂	25.		30,15	56		S. W.	Ditto, and cloudy weather.
♀	26.		29,69	57½		Ditto.	Ditto.
♂	27.		29,68	58		Ditto.	Ditto.
♀	28.		29,66	58		Ditto.	Ditto.



Painted from Nature by W.^m Hodges.

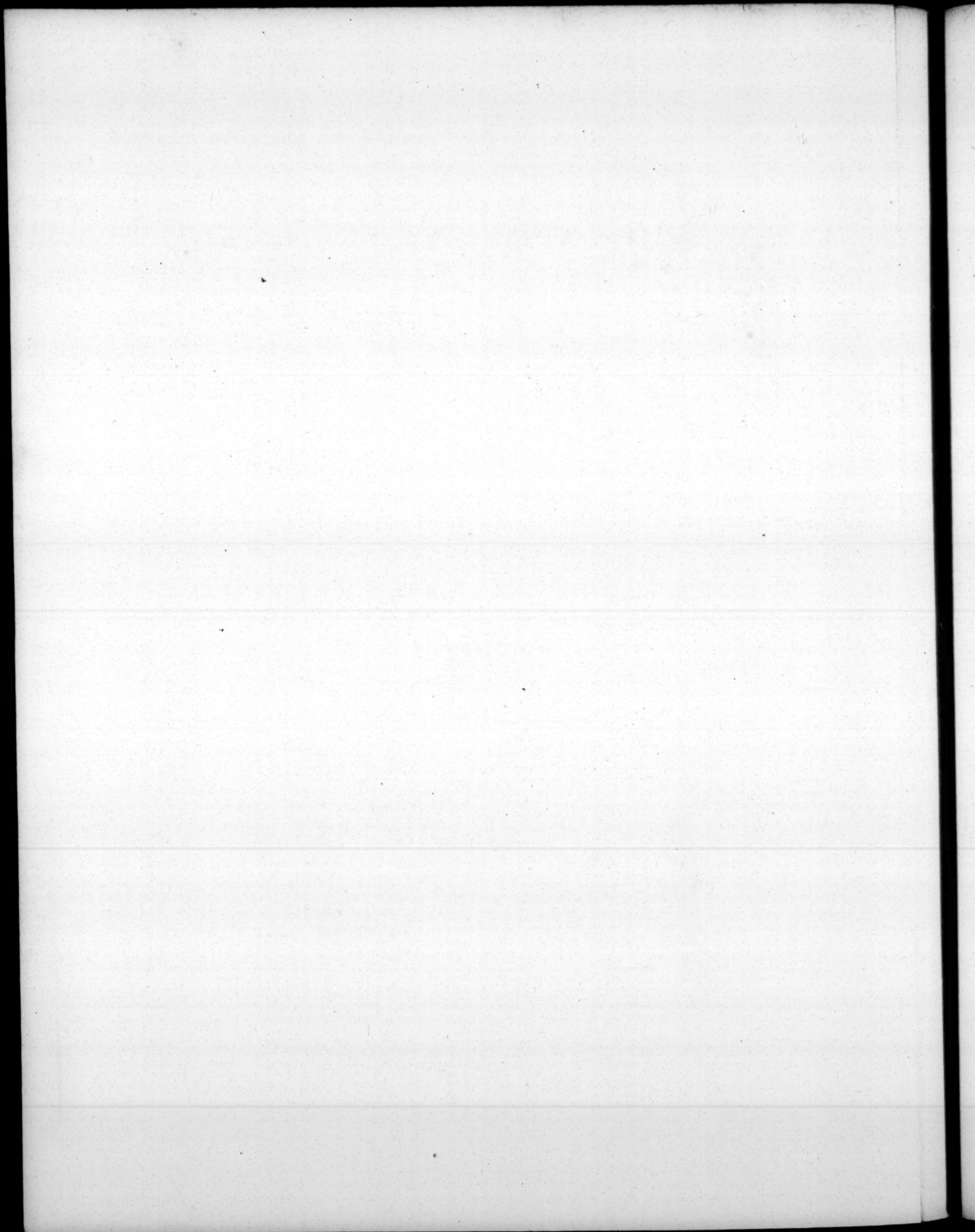




Painted from Nature by W. H. Hedges.



Engraved by D. Leppinore.



1773.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
h	May 29.		29,77	56½		S. W.	Brisk wind, and cloudy weather.
o	— 30.	54	29,81	57½	57½	Westerly.	Moderate wind, and fine weather.
D	— 31.		30,02	51½		S. W.	} Ditto, and mostly cloudy, with showers.
8	June 1.		30,28	50½		W. S. W.	
8	— 2.		30,20	49		S. W.	} Ditto, and fine weather.
u	— 3.	48	30,20	51½	54½	Ditto.	
8	— 4.		30,4	51½		Southerly.	Ditto, and cloudy.
h	— 5.		30,41	49½		S. S. E.	Strong wind, with rain.
o	— 6.		30,3	51½		Ditto.	Ditto.
D	— 7.		30,15	55		North.	Moderate wind, and fine weather.
8	— 8.	51½	29,90	52	52	Ditto.	Ditto.
8	— 9.	53½	29,82	55		Ditto.	Ditto.
u	— 10.	52½	29,7	54		Ditto.	Ditto.
8	— 11.	51½	29,77	51½		Ditto.	Moderate wind, and cloudy, with rain.
h	— 12.	49½	29,67	51½		Variable.	Moderate wind, with rain.
o	— 13.	50	30,0	51½		S. E.	Moderate wind, and cloudy; rain at times.
D	— 14.	49½	29,65	49		S. W.	Moderate wind, with drizzling rain.
8	— 15.	46	29,7	48½	48	East.	Ditto.
8	— 16.	48½	29,75	49		S. E.	Brisk wind, with rain.
u	— 17.	49½	29,75	49½		Ditto.	Brisk wind, and cloudy; rain at times.
8	— 18.	49½	29,8	48	47½	Ditto.	Brisk wind, and cloudy weather.
h	— 19.	47	30,12	48		South.	Moderate wind, and cloudy.
o	— 20.	48	30,15	48½		S. W.	Ditto.
D	— 21.	48	30,27	50½		Ditto.	Ditto.
8	— 22.	50½	30,35	52½		N. W.	Ditto.
8	— 23.	49½	30,27	50½		East.	Ditto.
u	— 24.	51½	29,47	51½		Ditto.	Strong wind, with rain.
8	— 25.	54	29,22			N. E.	Brisk wind, with rain.
h	— 26.	54	29,27	55½		East.	Ditto, and cloudy.
o	— 27.	52½	29,12	53½		S. W.	Little wind, and foggy.
D	— 28.	52	29,4	52½	50½	Variable.	Ditto.
8	— 29.	51	29,4	52½	51½	Ditto.	Moderate wind, and cloudy.
8	— 30.	49½	29,65	51½		South.	Ditto.
u	July 1.	48	29,75	49	49½	Ditto.	Moderate wind, and flying clouds.
8	— 2.	45	29,8	47		N. W.	Ditto, and fine weather.
h	— 3.	48	29,62	49½	49	N. E.	Ditto, with showers.
o	— 4.	49½	29,75	48½	49	S. E.	Ditto, and fine weather.
D	— 5.	48	29,85	48	49½	Ditto.	Brisk wind, with rain.
8	— 6.	50½	29,67	51		Ditto.	Ditto, and cloudy.
8	— 7.	51	29,47	52½		West.	Moderate wind, and fine weather.
u	— 8.	51½	29,45	51½	51½	S. W.	Ditto, with showers.
8	— 9.	49	29,85	50½	51	N. W.	Ditto, and cloudy.
h	— 10.	52½	29,82	51		South.	Brisk wind, and cloudy: rain at times.
o	— 11.	45	30,3	47	47½	S. W.	Moderate wind, and fine weather.
D	— 12.	47	30,27	49	49	West.	Ditto.
8	— 13.	47½	30,27	49½	49	Variable.	Little wind, and fine weather.
8	— 14.	48	30,1	50		N. E.	Moderate wind, and cloudy.
u	— 15.	49½	29,65	52		South.	Moderate wind, rain, and thick fog.

1773.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
♀	July 16.	46	29,5	46	46 $\frac{1}{2}$	South.	Brisk wind, and cloudy, with rain at times.
h	17.	44	29,8	44 $\frac{1}{2}$	45	Ditto.	Ditto, with showers of hail and rain.
○	18.	47 $\frac{1}{2}$	30,2	49 $\frac{1}{2}$	49	S. W.	Moderate wind, and fine weather.
h	19.	51 $\frac{1}{2}$	30,32	54	53 $\frac{1}{2}$	South.	Ditto.
♂	20.	52 $\frac{1}{2}$	30,15	58 $\frac{1}{2}$		East.	Moderate wind, and cloudy.
♀	21.	56 $\frac{1}{2}$	29,62	59 $\frac{1}{2}$	61	Ditto.	Brisk wind, and foggy.
h	22.	61	29,62	63	62 $\frac{1}{2}$	West.	Moderate wind, and fine weather: rain at times.
♀	23.	61 $\frac{1}{2}$	29,85	63 $\frac{1}{2}$		N. W.	Ditto, and cloudy, with rain.
h	24.	65	29,85	64 $\frac{1}{2}$		Ditto.	Strong wind in squalls, with rain.
○	25.	66	29,82	65 $\frac{1}{2}$	62	Ditto.	Strong wind, and heavy rain.
h	26.	66	29,90	66 $\frac{1}{2}$	67	Ditto.	Moderate wind, and fine weather.
♂	27.	67 $\frac{1}{2}$	30,07	67 $\frac{1}{2}$	69	Variable.	Ditto, and hazy.
♀	28.	66	30,05	69	68	N. W.	Little wind, and fine clear weather.
h	29.	68	29,97	69 $\frac{1}{2}$	70	Ditto.	Moderate wind, and hazy weather.
♀	30.	68 $\frac{1}{2}$	29,92	71		Ditto.	Ditto, and cloudy, with rain.
h	31.		29,92	68	68	Ditto.	Little wind, and flying clouds.
○	Aug. 1.	68	29,77	68 $\frac{1}{2}$		S. W.	Brisk wind, and squally, with showers.
h	2.	68	29,87	69 $\frac{1}{2}$	70 $\frac{1}{2}$	West.	Gentle breezes, and fine weather.
♂	3.	69 $\frac{1}{2}$	30,05	71 $\frac{1}{2}$	72 $\frac{1}{2}$	N. W.	Ditto.
♀	4.	72	30,05	74		Ditto.	Moderate wind, and fine weather.
h	5.	76 $\frac{1}{2}$	30,02	76 $\frac{1}{2}$	77 $\frac{1}{2}$	Ditto.	Brisk wind, and fine weather.
♀	6.	77	30,1	78		Variable.	Little wind, and cloudy, with rain at times.
After many wishes, and long expectation, we this day got the S. E. Trade wind. Its manner of coming on was rather remarkable. About 10 o'clock in the morning, a thick haze began to rise in the Eastern quarter, which by noon was become so thick, and had spread so far, that it was with difficulty we got the sun's meridian altitude; but the N. W. wind, which we had had for about a fortnight, during which time the weather was generally very fine and pleasant, still continued to blow. In the afternoon we had some pretty brisk showers, with which the N. W. wind died away, and it was calm till eight o'clock in the evening, when a brisk, steady gale sprung up at S. E., and proved permanent.							
h	7.	73	30,12	75		S. E.	Brisk wind, and cloudy.
○	8.	72 $\frac{1}{2}$	30,2	75		Ditto.	Ditto, and fine weather.
h	9.	73	30,22	76 $\frac{1}{2}$		Ditto.	Ditto, with rain at times.
♂	10.	74 $\frac{1}{2}$	30,2	78 $\frac{1}{2}$	77 $\frac{1}{2}$	East.	Ditto, and cloudy.
♀	11.	75	30,07	78 $\frac{1}{2}$		Ditto.	Moderate wind, and fine weather.
h	12.	76 $\frac{1}{2}$	30,07	78 $\frac{1}{2}$	79	Ditto.	Ditto.
♀	13.	76 $\frac{1}{2}$	30,1	79 $\frac{1}{2}$	79	Ditto.	Ditto.
h	14.	78	30,12	79	79	Ditto.	Ditto.
○	15.	77	30,1	80	80	Ditto.	Ditto.
h	16.	79	30,07	80 $\frac{1}{2}$		Ditto.	Light winds, and mostly fine weather.
♂	17.	75	30,02	81 $\frac{1}{2}$		S. E.	Ditto, very hot.
♀	18.	73 $\frac{1}{2}$	30,03	81	80	Variable.	Ditto.
h	19.	73 $\frac{1}{2}$	30,12	80	80	Ditto.	Ditto.
♀	20.	77 $\frac{1}{2}$	30,1	79 $\frac{1}{2}$	79 $\frac{1}{2}$	S. E.	Ditto.
h	21.	84 $\frac{1}{2}$	30,05	82		Ditto.	Ditto.
○	22.		30,02	81	80 $\frac{1}{2}$	N. W.	Strong wind, and cloudy weather.
h	23.	76 $\frac{1}{2}$	30,05	78		Calm.	Very clear, and extremely hot.

1773.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
♂	Aug. 24.	75½	30,02	75½		Variable.	Little wind, and cloudy, with showers.
♀	— 25.	74½	30,05	78		Ditto.	Ditto, and flying clouds.
♂	— 26.		30,13			Variable.	Fine weather, and very hot.
♀	— 27.	69½		84½		Easterly.	Ditto.
♂	— 28.		30,21	82	78	Ditto.	Ditto.
♀	— 29.	75	30,2	90		Ditto.	Ditto.
♂	— 30.	77½	30,2	91	83½	Ditto.	Ditto.
♀	— 31.	79	30,16	93	89	Ditto.	Ditto.
♂	Sept. 1.		30,0			Variable.	Brisk wind, with flying clouds.
♀	— 2.	76	29,95	77		Easterly.	Ditto.
♂	— 3.	75	30,1	76½	77½	Ditto.	Moderate wind, and flying clouds.
♀	— 4.		30,08	77	78	Ditto.	Ditto, and pleasant weather.
♂	— 5.		30,08	77½	78½	Ditto.	Ditto.
♀	— 6.		30,09	79		Ditto.	Ditto.
♂	— 7.	77½	30,12	79½		Ditto.	Ditto.
♀	— 8.	79	30,7	85		S. E.	Brisk wind, and very hot.
♂	— 9.	77½	30,06	81	81½	Ditto.	} Moderate wind, with showers.
♀	— 10.		30,05	80½		Ditto.	
♂	— 11.	75	30,06	79½		Ditto.	Ditto, and fine weather.
♀	— 12.	74½	30,13	77	77½	Ditto.	Little wind, and hot sultry weather.
♂	— 13.	74½	30,12	77	76	Ditto.	Brisk wind, and fine pleasant weather.
♀	— 14.	74	30,13	76½		Ditto.	Strong wind, with showers.
♂	— 15.		30,07	77	75½	Ditto.	Ditto.
♀	— 16.	77½	30,04	77½		Ditto.	Ditto.
♂	— 17.	72½	29,95	78½	77½	East.	Brisk wind, and pleasant weather.
♀	— 18.	77	30,07	79	79½	Ditto.	Moderate wind, and flying clouds.
♂	— 19.	77	30,02	79½	79½	Ditto.	Ditto.
♀	— 20.		29,97	81½		Ditto.	Mod. wind & cloudy; rain, thunder, & lightn.
♂	— 21.	78½	30,0	81	80½	Variable.	Ditto, thunder, &c.
♀	— 22.	74½	29,97	77½	76½	S. E.	Brisk wind, and cloudy, with rain.
♂	— 23.	69½	30,05	73		Ditto.	Moderate wind, and cloudy.
♀	— 24.	72½	30,05	74	74½	Ditto.	Brisk wind, and squally, with rain.
♂	— 25.	72½	30,02	73½	73½	Ditto.	Ditto, and squally.
♀	— 26.	71½	30,05	73	71	Ditto.	Ditto, and drizzling rain.
♂	— 27.	71½	30,07	71	70	Ditto.	Ditto, and cloudy.
♀	— 28.	71	30,07	72½		East.	Moderate wind, and fine weather.
♂	— 29.	71½	30,07	72½	72½	Ditto.	Ditto.
♀	— 30.	70	30,12	70	70	S. E.	Brisk wind, and fine weather.
♂	Oct. 1.	67	30,1	70	69	Ditto.	Ditto.
♀	— 2.	67	30,12	71½	74	Ditto.	Ditto.
♂	— 3.	70½	30,1	71½	69	Ditto.	Ditto.
♀	— 4.	69	30,12	71½	72	Ditto.	Ditto.
♂	— 5.	68	30,12	74½		Ditto.	Ditto.
♀	— 6.	71½	30,05	75½	73½	Ditto.	Ditto.
♂	— 7.	72½	30,05	73	72½	Ditto.	Moderate wind, and flying clouds.
♀	— 8.	73½	29,95	76½	75	S. W.	Ditto.
♂	— 9.	68½	30,30	73½		S. E.	Moderate wind, and cloudy.
♀	— 10.	70	30,07	69½	70	Ditto.	Brisk wind, and ditto.

1773.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
D	Oct. 11.	69	30,25	69 $\frac{1}{2}$	69 $\frac{1}{2}$	S. E.	Brisk wind, and cloudy.
8	12.	69 $\frac{1}{2}$	30,2	70 $\frac{1}{2}$	70 $\frac{1}{2}$	Ditto.	Ditto.
8	13.	66 $\frac{1}{2}$	30,2	70		Ditto.	Ditto.
14	14.	66 $\frac{1}{2}$	30,25	66 $\frac{1}{2}$		Eaft.	Moderate wind, and cloudy.
8	15.	65	30,32	68 $\frac{1}{2}$	70	Ditto.	Brisk wind, and cloudy at times.
h	16.	65	30,27	68	67	N. E.	Moderate wind, and clear weather.
o	17.	63 $\frac{1}{2}$	30,26	69	66	Ditto.	Little wind, and fine weather.
D	18.	64	30,2	66		Ditto.	Brisk wind, and ditto.
8	19.	64 $\frac{1}{2}$	30,02	66 $\frac{1}{2}$		Variable.	Ditto, and mostly cloudy: showers.
8	20.	61 $\frac{1}{2}$	29,72	60 $\frac{1}{2}$	61 $\frac{1}{2}$	West.	Ditto, and flying clouds.
14	21.	59 $\frac{1}{2}$	29,7	62	63 $\frac{1}{2}$	N. W.	Ditto.
8	22.	58	29,17	59 $\frac{1}{2}$	60 $\frac{1}{2}$	S. W.	Brisk wind, and cloudy.
h	23.	51 $\frac{1}{2}$	29,6	53 $\frac{1}{2}$	58	West.	Strong wind, and cloudy, with rain.
o	24.	57 $\frac{1}{2}$	29,37	60 $\frac{1}{2}$	62	N. W.	Strong wind, and cloudy. The water in
Dr. Lind's Wind-gage was depreffed 8-10ths of an inch at times: We were now under bare poles.							
D	25.	58	29,15	59 $\frac{1}{2}$		S. W.	Strong wind, and cloudy weather.
8	26.	54 $\frac{1}{2}$	29,52	54	53	Variable.	Brisk wind, and cloudy.
8	27.	52 $\frac{1}{2}$	29,57	58	56	N. W.	Very strong wind, and cloudy.
14	28.	56	29,12	58	56 $\frac{1}{2}$	Westerly.	Ditto, lightning.
8	29.	51 $\frac{1}{2}$	29,62	52 $\frac{1}{2}$	53	N. W.	Ditto.
h	30.	54	29,4	58 $\frac{1}{2}$		Ditto.	Ditto.
o	31.	55 $\frac{1}{2}$	29,22	57		Variable.	Ditto.
D	Nov. 1.	54 $\frac{1}{2}$	29,22	50 $\frac{1}{2}$		Ditto.	Brisk wind, with rain and thick fog.
8	2.	52	29,45	51 $\frac{1}{2}$		S. E.	Strong wind, and cloudy, with showers.
8	3.	51 $\frac{1}{2}$	29,85	58 $\frac{1}{2}$	58 $\frac{1}{2}$	Variable.	Little wind, and fine weather.
14	4.	54	29,82	62 $\frac{1}{2}$		Ditto.	Moderate wind, with showers.
8	5.		29,67			Ditto.	Brisk wind, with rain, and very cold.
h	6.	52	30,06	61	55 $\frac{1}{2}$	Ditto.	Moderate wind, and cloudy weather.
o	7.		30,2	67		Northerly.	Brisk wind, and fine weather, mostly.
D	8.	52	29,98	56		Southerly.	Cloudy, with rain, and cold raw weather.
8	9.	50	30,2	59	56 $\frac{1}{2}$	Ditto.	Wind moderate, and weather warmer.
8	10.	60	29,8	52 $\frac{1}{2}$	61	Variable.	Mostly cloudy, with showers.
14	11.		30,08	51 $\frac{1}{2}$		Ditto.	Much rain, and cold disagreeable weather.
8	12.	61	30,51	67 $\frac{1}{2}$	61	Ditto.	Moderate wind, and cloudy.
h	13.	56 $\frac{1}{2}$	30,40	69 $\frac{1}{2}$	64	Southerly.	Ditto, and fine weather.
o	14.	56 $\frac{1}{2}$	30,33	70	65 $\frac{1}{2}$	Ditto.	
D	15.	61	30,17	67	61 $\frac{1}{2}$	Ditto.	
8	16.	61	30,09	69 $\frac{1}{2}$	70 $\frac{1}{2}$	Ditto.	
8	17.		29,99	76		Northerly.	Brisk winds, with rain.
14	18.	70 $\frac{1}{2}$	29,7	73 $\frac{1}{2}$	71 $\frac{1}{2}$	N. W.	Strong wind, with ditto.
8	19.	65	29,5	64		Ditto.	Brisk wind, with ditto.
h	20.	51 $\frac{1}{2}$	29,7	62	47 $\frac{1}{2}$	S. W.	Moderate wind, and mostly cloudy: showers.
o	21.		29,95	60		N. W.	Ditto, with heavy rain at times.
D	22.		30,2	61		Ditto.	Wind moderate, and fine pleasant weather.
8	23.		30,29	61		Ditto.	Moderate wind, and ditto.
8	24.		30,29	66		Variable.	Ditto, and flying clouds: showers.
14	25.		30,31	61 $\frac{1}{2}$		N. W.	Brisk wind, and fine weather.
8	26.	61	30,17	63 $\frac{1}{2}$		North.	Moderate wind, and cloudy.

1773.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
h	Nov. 27.	63 $\frac{1}{2}$	29,97	62	61	Variable.	Brisk wind, and flying clouds.
o	— 28.	54	30,2	56		North.	Little wind, and hazy. Rain at times.
D	— 29.		30,1	55	54 $\frac{1}{2}$	S. W.	Mod. wind, and cloudy. Sticks & sea-weed.
8	— 30.	48	29,97	49	49	Ditto.	Brisk wind, and cloudy.
8	Dec. 1.	48	30,0	49 $\frac{1}{2}$		Ditto.	Ditto, with fog.
u	— 2.		29,92	46 $\frac{1}{2}$		Ditto.	Mod. wind, and foggy. Peng. and sea-weed.
9	— 3.	44	29,6	47		N. W.	Ditto. Penguins and seals.
h	— 4.	46 $\frac{1}{2}$	29,8	47 $\frac{1}{2}$		S. E.	Little wind, with fog and rain. Penguins.
o	— 5.	45	29,75	46 $\frac{1}{2}$	46 $\frac{1}{2}$	Easterly.	Little wind, and fine weather. Seals.
D	— 6.	47 $\frac{1}{2}$	29,55	49		North.	Mod. wind, and foggy. Seals and sea-weed.
8	— 7.	48	28,95	49	48 $\frac{1}{2}$	N. W.	Brisk wind and foggy, with rain. Drift-wood.
8	— 8.	50	29,45	43 $\frac{1}{2}$	43	N. W.	Strong wind, and foggy.
u	— 9.	44 $\frac{1}{2}$	29,72	44 $\frac{1}{2}$	43 $\frac{1}{2}$	S. W.	Ditto, with rain.
9	— 10.	36 $\frac{1}{2}$	29,45	36 $\frac{1}{2}$	35 $\frac{1}{2}$	Westerly.	Ditto, with fleet.
h	— 11.	38 $\frac{1}{2}$	29,07	39 $\frac{1}{2}$	39 $\frac{1}{2}$	S. W.	Brisk wind, with rain and snow. Saw an ice isl.
o	— 12.	31 $\frac{1}{2}$	29,07	32 $\frac{1}{2}$	35	Ditto.	Brisk wind, and squally. Snow and hail.
D	— 13.	30	28,92	32		West.	Brisk wind, and foggy. Much snow and ice.
8	— 14.	31 $\frac{1}{2}$	29,07	34 $\frac{1}{2}$	35	Ditto.	Ditto. Much ice.
8	— 15.	43	28,87	31		Ditto.	Brisk wind, with snow. Many ice isles.
u	— 16.	29 $\frac{1}{2}$	29,42	33		N. E.	Mod. wind, and cloudy: snow. Took up ice for water.
9	— 17.	31 $\frac{1}{2}$	29,07	33 $\frac{1}{2}$	33	North.	Mod. wind, and foggy: snow at times. Ice.
h	— 18.	33	29,0	33		Ditto.	Ditto, and thick fog. Several ice islands.
o	— 19.	33	28,8	34		Ditto.	Ditto, and foggy. Much ice.
D	— 20.	33	29,2	33		N. E.	Ditto, and cloudy. Much loose ice.
8	— 21.	33	28,7	34		Ditto.	Brisk wind, thick fog, and fleet. Many ice isl.
8	— 22.	31 $\frac{1}{2}$	28,95	33		North.	Ditto, and foggy. Many ice islands.
u	— 23.	31 $\frac{1}{2}$	29,22	35	29 $\frac{1}{2}$	Ditto.	Mod. wind, and foggy. Abundance of ice.
9	— 24.	31 $\frac{1}{2}$	28,62	32	33	N. W.	Ditto. Many islands of ice.
h	— 25.	33	29,2	34		Ditto.	Little wind, and cloudy. 96 ice isles seen at one time.
o	— 26.	35	29,17	37	35	Ditto.	Ditto. 200 ice isles seen at one time.
D	— 27.	36	29,0	35	34	N. E.	Ditto. Much ice: Took some up for water.
8	— 28.	32	28,65	33 $\frac{1}{2}$		S. E.	Brisk wind, with snow. Some ice islands.
8	— 29.	33 $\frac{1}{2}$	28,62	33	34 $\frac{1}{2}$	Southerly.	Mod. wind, much snow, and many ice isl.
u	— 30.	32	28,77	34 $\frac{1}{2}$	37	S. W.	Little wind, and cloudy. Few ice islands.
9	— 31.	33	29,05	35 $\frac{1}{2}$	35	Variable.	Little wind, and cloudy, with fleet at times.

* * To-day, while we were observing the meridian altitude of the sun, a shower of snow came from the west, and passed a-head of the ship; during which, a large island of ice, considerably within the visible horizon, and directly under the sun, was entirely hid by it; yet the horizon appeared as distinct, and much the same as it usually does in dark hazy weather. When the shower was over, I found that it required the sun to be dipped something more than his whole diameter to bring his lower limb to the nearest edge of the ice island, which must have been farther off than the visible horizon, during the shower; and yet this would have been taken as the real horizon, without any suspicion, if it had been every where equally obscured. Hence may be inferred the uncertainty of altitudes taken in foggy, or what seamen, in general, call hazy weather.

1774.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
h	Jan. 1.	34	28,87	36 $\frac{1}{2}$	37 $\frac{1}{4}$	S. W.	Moderate wind, and cloudy, with snow.
o	— 2.	34 $\frac{1}{2}$	29,05	38 $\frac{1}{2}$		S. E.	Ditto.
D	— 3.	36 $\frac{1}{2}$	29,12	36	39	N. W.	Brisk wind, with snow and fleet.
8	— 4.	44 $\frac{1}{2}$	29,27	46 $\frac{1}{2}$		Ditto.	Ditto, and foggy, with rain.
8	— 5.	47	29,22	46 $\frac{1}{2}$		Ditto.	Strong wind, and cloudy. Rain at times.
u	— 6.	46	29,22	47	50	Ditto.	Brisk wind, and cloudy. Sea-weed.
8	— 7.	47 $\frac{1}{2}$	29,25	50	50 $\frac{1}{2}$	Ditto.	Brisk wind, and flying clouds.
h	— 8.	47 $\frac{1}{2}$	29,47	49 $\frac{1}{2}$	50	West.	Ditto.
o	— 9.	49	29,7	51 $\frac{1}{2}$		Ditto.	Ditto. Many birds.
D	— 10.	49 $\frac{1}{2}$	29,52	52 $\frac{1}{2}$		Ditto.	Mod. wind, and flying clouds. Many birds.
8	— 11.	48 $\frac{1}{2}$	29,47	50	50	N. W.	Brisk wind, and squally, with showers.
8	— 12.	53	29,71	56	55	Ditto.	Ditto, and flying clouds.
u	— 13.	52	29,45	53 $\frac{1}{2}$		Ditto.	Ditto, and foggy. Sea-weed.
8	— 14.	51	29,41	51 $\frac{1}{2}$	54 $\frac{1}{2}$	Ditto.	Ditto, and foggy.
h	— 15.	48 $\frac{1}{2}$	29,27	51		Ditto.	Strong wind, and foggy, with rain.
o	— 16.	48	29,77	47 $\frac{1}{2}$	49	West.	Brisk wind, and hazy.
D	— 17.	43 $\frac{1}{2}$	29,67	41 $\frac{1}{2}$	41	Ditto.	Ditto, with rain and fleet.
8	— 18.	40 $\frac{1}{2}$	28,9	40	41 $\frac{1}{2}$	Variable.	Ditto, and foggy, with rain at times.
8	— 19.	39	28,62	39 $\frac{1}{2}$		Ditto.	Ditto, with rain. Sea-weed.
u	— 20.	47 $\frac{1}{2}$	28,52	40	38	S. E.	Ditto, and cloudy. Saw two ice islands.
8	— 21.	36	28,57	37	38	Ditto.	Ditto, and cloudy, with fleet at times.
h	— 22.	36	28,7	37 $\frac{1}{2}$		S. W.	Mod. wind: snow and rain. Several ice isl.
o	— 23.	37	28,57	38 $\frac{1}{2}$		S. W.	Ditto, and cloudy. Sleet, and some ice isles.
D	— 24.	40 $\frac{1}{2}$	28,57	39		N. W.	Brisk wind, and cloudy. One ice island.
8	— 25.	39	28,82	42 $\frac{1}{2}$	39 $\frac{1}{2}$	Ditto.	Moderate wind, and foggy: fleet.
8	— 26.		29,05	40	36	N. E.	Little wind, and cloudy. Several ice islands.
u	— 27.	37 $\frac{1}{2}$	28,72	37 $\frac{1}{2}$		Ditto.	Mod. wind, and thick fog. Some ice isl.
8	— 28.	35 $\frac{1}{2}$	28,85	36	33 $\frac{1}{2}$	North.	Ditto. Much loose ice.
h	— 29.	34 $\frac{1}{2}$	28,7	36 $\frac{1}{2}$	33 $\frac{1}{2}$	Easterly.	Mod. wind, & cloudy, with snow sometimes.
o	— 30.	31 $\frac{1}{2}$	28,8	32	32 $\frac{1}{2}$	E. N. E.	Ditto, and foggy, with snow.

* * This morning we discovered a prodigious large field of ice right a-head, extending east and west farther than could be seen from off the main-top-gallant yard. At a distance, the whole appeared very high, and like one solid fixed mass, with many exceeding high, mountainous parts in it; but when we came nearer, we found its edge, which before appeared upright, and of one solid piece, scarce higher than the water, and composed of many small pieces, close joined together, with some pretty large ice islands amongst. Farther in, it yet appeared high and mountainous; but probably this also was a deception, caused by the very great refractive power of the atmosphere, near the horizon, in those frigid regions: many instances of which I had occasion to mention in the account of my Voyage to, and residence in, Hudson's Bay. Let me add here, once for all, that I have had abundant proofs of the effects of these extraordinary refractions on altitudes of the sun, &c. taken from the horizon of the sea with Hadley's Quadrant this voyage. For, universally, I believe without a single exception, the east longitude shewn by the Watch K in the morning, fell short of that deduced from it in the afternoon, when both were reduced to the same time by the Log, and that sometimes by 10, 12, and even

1774.	Morn.		Noon.		Even.	Winds.	Weather, &c.
	Therm.	Barom.	Therm.	Therm.			
15 minutes of longitude: I mean when we were in high latitudes; for, between the tropics, I seldom knew them differ more than 3 minutes, and not often so much as that.							
D Jan.	31.	33	28,9	34	32½	N. E.	Mod. wind, and foggy. One ice island.
♂ Feb.	1.	35	28,85	35		Ditto.	Ditto, and cloudy. Several ice islands.
♀ —	2.	35	28,75	37	33½	S. E.	Ditto. One ice island.
♂ —	3.	32¾	28,9	35	34¾	Ditto.	Little wind, and cloudy.
♀ —	4.	34	29,0	34½	34⅔	N. E.	Ditto, and mostly cloudy.
♂ —	5.	37½	28,72	38¾	38¾	North.	Moderate wind, and cloudy, with snow.
⊙ —	6.	36	28,72	39¾		S. W.	Ditto, and cloudy: snow and hail.
D —	7.	37	28,65	40	38	Ditto.	Ditto, and cloudy. Saw divers.
♂ —	8.	39	29,62	41½		Ditto.	Brisk wind, and cloudy, with snow and rain.
♀ —	9.	46½	29,12	47		Ditto.	Brisk wind, with rain.
♂ —	10.	44	29,17	47	47	Ditto.	Strong wind, with clouds and rain.
♀ —	11.	49	29,45	51	49½	Westerly.	Very strong wind, and cloudy. The water funk in Dr. Lind's Wind-gage 9/10 of an inch, during the squalls, which was the most I ever saw.
♂ —	12.	47½	29,22	47¾	49	Westerly.	Moderate wind, and fine weather.
⊙ —	13.	49¾	30,0	52	51½	Ditto.	Ditto, and flying clouds.
D —	14.	52	30,17	53	51⅔	Variable.	Ditto, and drizzling rain.
♂ —	15.	51	30,07	54		N. W. by W.	Ditto, and foggy, with drizzling rain.
It may not be improper to remark, that in all our long trip to the southward this year, we never once saw the southern lights: indeed I do not recollect a single night that was clear enough.							
♀ —	16.	55	30,0	56		N. W.	Brisk wind, and foggy, with rain.
♂ —	17.	53	29,92	55		Ditto.	Moderate wind, and cloudy.
♀ —	18.	52	29,92	50⅔		S. W.	Strong wind in squalls, with rain.
♂ —	19.	55	30,37	58½	59	West.	Moderate wind, and cloudy.
⊙ —	20.	61	30,42	66	66	Ditto.	Ditto, and fine weather.
D —	21.		30,42	67½		S. W.	Ditto.
♂ —	22.	68½	30,47	69		S. E.	Brisk wind, with showers.
♀ —	23.	64¾	30,45	69	66½	North.	Moderate wind, and flying clouds.
♂ —	24.	71	30,27	71		N. W.	Ditto.
♀ —	25.	70	29,95	69	68½	S. W.	Moderate wind, and cloudy, with rain.
♂ —	26.	65½	30,02	65	64¾	South.	Brisk wind, and cloudy.
⊙ —	27.	64½	30,2	68⅓	68	Easterly.	Moderate wind, and mostly cloudy.
D —	28.	66¾	30,22	71½		Variable.	Ditto.
♂ March	1.		30,2	71¾	73⅔	West.	Little wind, and fine weather.
♀ —	2.		30,17	74	74	N. W.	Ditto.
♂ —	3.	71	30,22	74	75	N. W.	Ditto.
♀ —	4.	74	30,3	74½	76	Ditto.	Ditto.
♂ —	5.		30,3	75		Variable.	Ditto.
⊙ —	6.		30,3	74	73½	East.	Mod. wind, with showers. Saw many pieces of sponge.
D —	7.		30,3	74½	74	Ditto.	Ditto, and flying clouds. Sponge & sea-weed.
♂ —	8.	73¾	30,35	75¾		Ditto.	Ditto. Birds, sponge, sea-weed, &c.
♀ —	9.	74½	30,37	77	76½	Ditto.	Ditto. Sea-snakes, sponge, leaves, & birds.
♂ —	10.	73½	30,32	76¾	76	Ditto.	Ditto. Many birds, sea-weed, &c.
♀ —	11.	75	30,3	75	75¾	N. E.	Ditto. Saw Easter Island.

1774.	Morn.		Noon.		Even.	Winds.	Weather, &c.
	Therm.	Barom.	Therm.	Therm.	Therm.		
h March 12.	75	30,27	75 $\frac{1}{4}$	75 $\frac{1}{2}$	75 $\frac{1}{2}$	Variable.	Little wind, and flying clouds.
o ——— 13.	75 $\frac{1}{4}$	30,4	74	74 $\frac{1}{4}$	74 $\frac{1}{4}$	S. E.	Moderate wind, and flying clouds.
D ——— 14.	72 $\frac{1}{2}$	30,27	74 $\frac{1}{2}$	74 $\frac{1}{2}$	74 $\frac{1}{2}$	E. S. E.	Ditto.
8 ——— 15.		30,27	73			Easterly.	Little wind, and very hot weather.
8 ——— 16.	71	30,22	75	76 $\frac{1}{2}$	76 $\frac{1}{2}$	N. E.	Ditto, and flying clouds.
u ——— 17.	75 $\frac{1}{2}$	30,3	77	76 $\frac{1}{4}$	76 $\frac{1}{4}$	Ditto.	Moderate wind, and fine weather.
8 ——— 18.	75 $\frac{3}{4}$	30,32	76 $\frac{1}{2}$			Ditto.	Ditto.
h ——— 19.	74 $\frac{3}{4}$	30,25	77	76 $\frac{1}{2}$	76 $\frac{1}{2}$	Eaft.	Ditto.
o ——— 20.	75 $\frac{3}{4}$	30,2	77			Ditto.	Brisk wind, and mostly cloudy.
D ——— 21.	75 $\frac{1}{2}$	30,25	77			Ditto.	Moderate wind, and flying clouds.
8 ——— 22.	74 $\frac{1}{2}$	30,2	76 $\frac{1}{2}$	75 $\frac{1}{2}$	75 $\frac{1}{2}$	Ditto.	Ditto, with showers.
8 ——— 23.	75 $\frac{1}{2}$	30,1	77 $\frac{1}{2}$	75 $\frac{1}{2}$	75 $\frac{1}{2}$	N. E.	Ditto, with flying clouds.
u ——— 24.	74	30,1	77	77	77	Eaft.	Ditto.
8 ——— 25.	76 $\frac{1}{2}$	30,17	78	76 $\frac{1}{2}$	76 $\frac{1}{2}$	Ditto.	Ditto.
h ——— 26.	78	30,1	78 $\frac{1}{2}$	78 $\frac{1}{2}$	78 $\frac{1}{2}$	Ditto.	Ditto.
o ——— 27.	78 $\frac{1}{2}$	30,02	80	79	79	Ditto.	Ditto.
D ——— 28.	78 $\frac{2}{3}$	30,05	80	80	80	Ditto.	Ditto.
8 ——— 29.	79 $\frac{1}{4}$	29,97	81	80 $\frac{1}{4}$	80 $\frac{1}{4}$	Ditto.	Ditto.
8 ——— 30.	79	30,02	80 $\frac{3}{4}$	80	80	Ditto.	Ditto.
u ——— 31.	80	30,0	80 $\frac{1}{2}$	80 $\frac{1}{2}$	80 $\frac{1}{2}$	Ditto.	Ditto.
8 April 1.	80 $\frac{3}{4}$	29,97	81	81	81	Ditto.	Ditto.
h ——— 2.	79 $\frac{1}{2}$	29,95	81 $\frac{3}{4}$	81	81	Ditto.	Ditto.
o ——— 3.	80 $\frac{1}{4}$	30,02	82	81 $\frac{3}{4}$	81 $\frac{3}{4}$	Ditto.	Ditto.
D ——— 4.	81 $\frac{1}{2}$	30,0	82 $\frac{1}{4}$	82 $\frac{1}{2}$	82 $\frac{1}{2}$	Ditto.	Ditto.
8 ——— 5.	81 $\frac{3}{4}$	30,0	83	82 $\frac{3}{4}$	82 $\frac{3}{4}$	Ditto.	Ditto.
8 ——— 6.	81 $\frac{3}{4}$	29,97	83 $\frac{1}{2}$	82 $\frac{1}{2}$	82 $\frac{1}{2}$	Ditto.	Ditto, with showers.
u ——— 7.	77 $\frac{1}{2}$	30,0	81 $\frac{1}{2}$	81 $\frac{1}{2}$	81 $\frac{1}{2}$	Eaft.	Ditto, with heavy showers.
8 ——— 8.	82	29,97	82 $\frac{1}{2}$	82 $\frac{1}{2}$	82 $\frac{1}{2}$	Ditto.	Brisk wind, in squalls, with showers.
h ——— 9.	82	29,85	84 $\frac{1}{2}$	84 $\frac{1}{2}$	84 $\frac{1}{2}$	Ditto.	Strong gusts of wind, with showers.
o ——— 10.	81	29,87	84 $\frac{1}{2}$	84 $\frac{1}{2}$	84 $\frac{1}{2}$	Ditto.	Squally, with showers.
D ——— 11.	81 $\frac{3}{4}$	29,85	85 $\frac{1}{2}$	85 $\frac{1}{2}$	85 $\frac{1}{2}$	E. S. E.	Ditto.
8 ——— 12.	84 $\frac{1}{2}$	30,02	84 $\frac{1}{2}$	81 $\frac{1}{2}$	81 $\frac{1}{2}$	S. E.	Brisk wind, with showers.
8 ——— 13.	79	29,97	82 $\frac{1}{4}$	82 $\frac{1}{2}$	82 $\frac{1}{2}$	Ditto.	Moderate wind, and mostly cloudy.
u ——— 14.	81 $\frac{1}{2}$	29,90	82 $\frac{1}{2}$	83	83	Eaft.	Brisk wind, and flying clouds.
8 ——— 15.	82 $\frac{1}{2}$	30,02	83	82 $\frac{1}{2}$	82 $\frac{1}{2}$	Ditto.	Brisk winds, and flying clouds.
h ——— 16.	82	30,02	83 $\frac{1}{2}$	83 $\frac{1}{4}$	83 $\frac{1}{4}$	Ditto.	Ditto.
o ——— 17.	81 $\frac{1}{2}$	30,0	83 $\frac{1}{4}$			Ditto.	Moderate wind, and flying clouds.
D ——— 18.	81 $\frac{1}{2}$	30,07	82 $\frac{1}{4}$			Ditto.	Ditto.
8 ——— 19.	81 $\frac{1}{3}$	30,1	82 $\frac{1}{4}$	82	82	Ditto.	Ditto.
8 ——— 20.	79	30,07	81	79 $\frac{1}{2}$	79 $\frac{1}{2}$	Ditto.	Ditto, and cloudy, with rain.
u ——— 21.	81 $\frac{1}{2}$	30,1	82 $\frac{1}{2}$			Variable.	Ditto, and cloudy.
8 ——— 22.		30,03	81 $\frac{1}{2}$			Ditto.	Ditto, and flying clouds.
h ——— 23.	88 $\frac{1}{2}$	30,11	88 $\frac{1}{3}$	82 $\frac{1}{2}$	82 $\frac{1}{2}$	Ditto.	Moderate wind, and flying clouds, with showers.
o ——— 24.	80	30,09	90			Ditto.	
D ——— 25.		30,02	78			Ditto.	
8 ——— 26.	80 $\frac{3}{4}$	30,03	84 $\frac{1}{2}$	84 $\frac{1}{2}$	84 $\frac{1}{2}$	Ditto.	
8 ——— 27.	80	30,18	92	84	84	Ditto.	
u ——— 28.		30,10	83			Ditto.	

1774.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
♀	April 29.	83 $\frac{1}{4}$	30,05	88 $\frac{1}{4}$	87	East.	Moderate wind, and fine weather.
h	— 30.	81	30,02	88 $\frac{1}{4}$	86 $\frac{1}{2}$	Ditto.	Ditto.
○	May 1.	83 $\frac{3}{4}$	30,04	90 $\frac{1}{2}$	90 $\frac{2}{3}$	E. N. E.	Ditto.
h	— 2.		30,11	89 $\frac{1}{3}$		S. W.	Squally, with heavy showers of rain.
♂	— 3.	82 $\frac{1}{2}$	30,03	90	85 $\frac{2}{3}$	Ditto.	Ditto.
♀	— 4.	81	30,03	93	86 $\frac{1}{2}$	Ditto.	Moderate wind, and fine weather.
h	— 5.		30,02	94 $\frac{3}{4}$	72 $\frac{1}{2}$	East.	Ditto.
♀	— 6.	83	30,02	97	72 $\frac{1}{3}$	Ditto.	Ditto.
h	— 7.	80	30,02	91 $\frac{1}{2}$	79 $\frac{1}{2}$	Ditto.	Ditto.
○	— 8.	81	30,09	93 $\frac{1}{2}$	93	Ditto.	Ditto.
h	— 9.	82 $\frac{1}{2}$	30,03	91	84	Ditto.	Ditto.
♂	— 10.		30,03	84	77 $\frac{1}{3}$	Ditto.	Ditto.
♀	— 11.					Variable.	Rainy, unfettled weather.
h	— 12.		30,09	80 $\frac{1}{2}$		N. E.	Ditto, with thunder and lightning.
♀	— 13.		30,12	81		East.	Moderate wind, and fine weather.
h	— 14.		30,08	82 $\frac{1}{2}$		E. by N.	Ditto.
○	— 15.		30,15	84 $\frac{1}{2}$	83	S. E.	Ditto.
h	— 16.	79 $\frac{1}{2}$	30,2	84 $\frac{1}{4}$	81	E. S. E.	Ditto.
♂	— 17.	79	30,15	83	83	E. by S.	Ditto.
♀	— 18.	79	30,12	82 $\frac{1}{4}$	81	East.	Little wind, and frequent showers.
h	— 19.	77	30,07	80 $\frac{1}{2}$	80 $\frac{1}{4}$	Ditto.	Moderate wind, and fine weather.
♀	— 20.	79	30,09	82 $\frac{1}{3}$	80 $\frac{1}{2}$	Ditto.	Ditto.
h	— 21.	79	30,11	84	81 $\frac{1}{4}$	Ditto.	Ditto.
○	— 22.	79 $\frac{1}{2}$	30,12	83 $\frac{3}{4}$		Ditto.	Ditto.
h	— 23.	78 $\frac{1}{2}$	30,05	83 $\frac{2}{3}$		Ditto.	Moderate wind, with showers.
♂	— 24.	79 $\frac{3}{4}$	29,92	83		Variable.	Ditto, and flying clouds.
♀	— 25.	79 $\frac{3}{4}$	29,92	78		S. E.	Ditto, and cloudy, with rain.
h	— 26.	77 $\frac{1}{2}$	29,45	81 $\frac{1}{2}$		E. S. E.	Ditto.
♀	— 27.	75 $\frac{2}{3}$	30,08	79 $\frac{1}{2}$	80 $\frac{2}{3}$	East.	Brisk wind, and mostly cloudy.
h	— 28.	76 $\frac{1}{2}$	30,11	80 $\frac{3}{4}$	80 $\frac{1}{2}$	Ditto.	Moderate wind, and fine weather.
○	— 29.	75 $\frac{1}{2}$	30,03	82	81 $\frac{1}{4}$	Ditto.	Ditto.
h	— 30.	75	30,02	78 $\frac{1}{3}$	82 $\frac{1}{2}$	Ditto.	Ditto.
♂	— 31.	79 $\frac{1}{2}$	29,98	80	81 $\frac{1}{2}$	Ditto.	Ditto.
♀	June 1.	77 $\frac{1}{2}$	29,98	81	81 $\frac{1}{4}$	Ditto.	Ditto.
h	— 2.	77	29,96	79 $\frac{2}{3}$	81	Ditto.	Ditto.
♀	— 3.	77 $\frac{1}{4}$	29,95	79	81 $\frac{1}{4}$	Ditto.	Ditto.
h	— 4.	81	30,0	81 $\frac{1}{2}$	81 $\frac{1}{4}$	Ditto.	Ditto.
○	— 5.	79 $\frac{1}{2}$	29,97	82 $\frac{1}{2}$	83	Ditto.	Ditto, and cloudy.
h	— 6.	81 $\frac{2}{3}$	30,0	82 $\frac{1}{2}$		N. E.	Ditto.
♂	— 7.	79 $\frac{3}{4}$	29,85	81 $\frac{1}{2}$	80	Variable.	Ditto, with rain, thunder, and lightning.
♀	— 8.	78	29,97	80 $\frac{1}{4}$	82	N. E.	Little wind, and cloudy.
h	— 9.	79	29,87	81	81	Variable.	Moderate wind, and mostly cloudy.
♀	— 10.	76	29,95	77 $\frac{3}{4}$	77 $\frac{1}{2}$	S. E.	Squally, with rain, and much lightning.
h	— 11.	77	30,05	77 $\frac{1}{2}$	77	Ditto.	Moderate wind, and cloudy, with showers.
○	— 12.	74	30,1	75		Ditto.	Brisk wind, with drizzling rain.
h	— 13.	75		80	77 $\frac{1}{2}$	Variable.	Moderate wind, and cloudy.
♂	— 14.	75 $\frac{1}{4}$	30,0	75 $\frac{1}{2}$	76 $\frac{1}{2}$	Ditto.	Little wind, and flying clouds.
♀	— 15.	75 $\frac{1}{4}$	30,1	75 $\frac{1}{4}$	75 $\frac{1}{3}$	South.	Ditto.

1774.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
June	16.	74 $\frac{1}{2}$	30,1	75 $\frac{1}{2}$	74 $\frac{1}{2}$	South.	Moderate wind, and fine weather.
☿	17.	73 $\frac{3}{4}$	30,12	75	73	S. E.	Ditto.
♄	18.	73 $\frac{3}{4}$	30,12	76 $\frac{1}{4}$		Ditto.	Ditto.
☉	19.	74	30,05	77	75	East.	Ditto.
♂	20.	75 $\frac{1}{2}$	30,1	77 $\frac{1}{2}$	76 $\frac{1}{4}$	Ditto.	Ditto.
♂	21.	76	30,05	78	79	Ditto.	Ditto.
♂	22.	76	30,07	77 $\frac{1}{2}$	76	Ditto.	Ditto.
♄	23.	76 $\frac{1}{2}$	30,07	77 $\frac{1}{2}$	76 $\frac{2}{3}$	Ditto.	Ditto.
☿	24.	76 $\frac{1}{4}$	30,07	79	78 $\frac{1}{4}$	N. E.	Ditto.
♄	25.	78	30,12	77 $\frac{3}{4}$		Variable.	Little wind, and hazy.
☉	26.	76	30,1	75	78	Ditto.	Ditto, and fine weather.
♂	27.	74 $\frac{1}{2}$	30,12	74 $\frac{1}{2}$	74 $\frac{1}{2}$	Ditto.	Ditto.
♂	28.				74 $\frac{1}{2}$	Ditto.	Ditto.
♂	29.	74 $\frac{1}{2}$	30,05	74 $\frac{1}{2}$	76 $\frac{1}{4}$	West.	Ditto.
♄	30.	74 $\frac{1}{2}$	30,12	75 $\frac{1}{4}$	72 $\frac{1}{4}$	S. E.	Moderate wind, and cloudy weather.
☿	July 1.	73	30,17	75	73 $\frac{1}{4}$	Ditto.	Ditto.
♄	2.	72	30,15	72	72 $\frac{1}{2}$	Ditto.	Ditto, and fine weather.
☉	3.	71	30,15	74	72 $\frac{1}{4}$	Ditto.	Ditto.
♂	4.	74 $\frac{1}{2}$	30,12	75 $\frac{1}{2}$	76 $\frac{1}{4}$	Ditto.	Ditto, and cloudy.
♂	5.	75	30,07	75 $\frac{2}{3}$		Ditto.	Ditto.
♂	6.	74 $\frac{1}{2}$	30,15	76 $\frac{1}{3}$	76 $\frac{1}{4}$	East.	Ditto.
♄	7.	75	30,1	77	77 $\frac{1}{4}$	Ditto.	Ditto.
☿	8.	75 $\frac{1}{2}$	30,1	78		North.	Ditto.
♄	9.	77	29,9	78		South.	Little wind, with heavy showers of rain.
☉	10.	73 $\frac{1}{4}$	29,92	74 $\frac{1}{4}$	74	S. E.	Brisk wind, in squalls, with rain.
♂	11.	73	29,9	74	75	Ditto.	Brisk wind, and cloudy.
♂	12.	74 $\frac{1}{4}$	29,95	76	75 $\frac{2}{3}$	Ditto.	Ditto.
♂	13.	75 $\frac{1}{3}$	29,97	76	76 $\frac{1}{2}$	Ditto.	Moderate wind, and fine weather.
♄	14.	76	30,02	78	77 $\frac{1}{2}$	East.	Ditto.
☿	15.	76 $\frac{1}{2}$	30,02	79 $\frac{2}{3}$	78 $\frac{1}{2}$	S. E.	Ditto.
♄	16.	78 $\frac{1}{2}$	30,02	79 $\frac{1}{4}$		Ditto.	Brisk wind, in squalls, with rain.
☉	17.	78	30,05	76 $\frac{1}{2}$		Ditto.	Heavy squalls of wind and rain.
♂	18.	75 $\frac{1}{2}$	30,05	76 $\frac{1}{2}$	76 $\frac{1}{2}$	Ditto.	Strong wind, and showers.
♂	19.	75	30,02	76 $\frac{1}{2}$	76 $\frac{3}{4}$	Ditto.	Ditto.
♂	20.		30,12	75	74 $\frac{1}{2}$	Ditto.	Moderate wind, and cloudy.
♄	21.	74 $\frac{1}{2}$	30,02	77 $\frac{3}{4}$	74	S. E.	Ditto, and flying clouds.
☿	22.	74 $\frac{1}{3}$	30,02	76 $\frac{2}{3}$	76	Variable.	Little wind, and flying clouds.
♄	23.	76	29,97	80	77 $\frac{1}{2}$	N. E.	Moderate wind, and cloudy weather.
☉	24.	76	30,0	79 $\frac{1}{2}$		Variable.	Ditto.
♂	25.	77 $\frac{1}{4}$	30,0	80 $\frac{1}{2}$	79	Ditto.	Little wind, and fine weather.
♂	26.	78 $\frac{1}{4}$	30,0	78 $\frac{1}{2}$	81	S. W.	Ditto.
♂	27.	74	30,0	74 $\frac{1}{4}$	74 $\frac{3}{4}$	Ditto.	Ditto.
♄	28.	70 $\frac{1}{2}$	30,02	71 $\frac{1}{3}$	75	Ditto.	Ditto.
☿	29.	70 $\frac{1}{2}$	30,02	74	72 $\frac{1}{4}$	S. E.	Ditto.
♄	30.	70 $\frac{3}{4}$	30,05	72 $\frac{2}{3}$	76 $\frac{1}{2}$	Ditto.	Ditto.
☉	31.	73 $\frac{1}{4}$	30,1	81	74 $\frac{1}{2}$	Ditto.	Ditto.
♂	Aug. 1.	73	30,12	73 $\frac{1}{3}$	76 $\frac{1}{4}$	Variable.	Ditto.
♂	2.	73 $\frac{1}{3}$	30,1	78 $\frac{1}{3}$	78	South.	Ditto.

1774.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
Aug.	3.	73	30,1	74	74 $\frac{1}{4}$	East.	Little wind, and fine weather.
	4.	70 $\frac{1}{2}$	30,02	78	77 $\frac{1}{2}$	West.	Ditto.
	5.	73 $\frac{1}{2}$	29,89	78		S. E.	Moderate wind, and mostly cloudy.
	6.	70 $\frac{1}{2}$	29,93	74 $\frac{1}{4}$		Ditto.	Moderate wind, and flying clouds.
	7.	71 $\frac{1}{2}$		78 $\frac{1}{4}$	78 $\frac{1}{4}$	Ditto.	Ditto.
	8.	68 $\frac{3}{4}$	30,14	73 $\frac{1}{2}$		Ditto.	Moderate wind, and mostly cloudy.
	9.	71 $\frac{1}{2}$	30,13	73 $\frac{3}{4}$		East.	Moderate wind, and cloudy weather.
	10.	70 $\frac{3}{4}$	30,17	74		N. E.	Ditto.
	11.	71	30,08	77	75 $\frac{1}{4}$	N. N. W.	Moderate wind, with showers.
	12.	72 $\frac{1}{2}$	30,08	83 $\frac{1}{4}$	80 $\frac{1}{4}$	E. S. E.	Moderate wind, and cloudy weather.
	13.	73 $\frac{1}{2}$	30,19	75		N. E.	Little wind, and close, cloudy weather.
	14.	72	30,11	76		N. N. W.	Moderate wind, and mostly cloudy.
	15.	75 $\frac{1}{4}$	30,08	80	81 $\frac{1}{2}$	Ditto.	Little wind, and cloudy.
	16.	76	29,97	79 $\frac{1}{2}$		E. N. E.	Little wind, and flying clouds.
	17.	78 $\frac{1}{4}$	30,12	79 $\frac{1}{2}$	79 $\frac{1}{4}$	East.	Ditto, and cloudy weather.
	18.	73	30,10	78		E. by N.	Moderate wind, and cloudy weather.
	19.	77	30,02	79 $\frac{1}{2}$	78	Westerly.	Little wind, with showers.
	20.	72 $\frac{1}{4}$	30,1	73		S. E.	Brisk wind, and cloudy.
	21.	70 $\frac{1}{2}$	30,15	73 $\frac{1}{2}$	72	Ditto.	Moderate wind, and mostly cloudy.
	22.	70 $\frac{1}{4}$	30,17	75 $\frac{1}{2}$	74	East.	Ditto.
	23.	72 $\frac{1}{4}$	30,15	73 $\frac{3}{4}$		S. E.	Brisk wind, and cloudy.
	24.	78 $\frac{1}{2}$	30,1	81	80 $\frac{1}{4}$	Ditto.	Moderate wind, and cloudy.
	25.	79 $\frac{1}{2}$	30,1	81 $\frac{1}{2}$	81	Ditto.	Ditto.
	26.	76 $\frac{1}{4}$	29,95	80 $\frac{1}{4}$		Ditto.	Little wind, and fine weather.
	27.	74 $\frac{1}{2}$	30,02		79 $\frac{3}{4}$	East.	Ditto.
	28.	78 $\frac{1}{2}$	30,0	78 $\frac{1}{2}$	82 $\frac{1}{4}$	Variable.	Ditto.
	29.	78	30,1	80		S. E.	Ditto.
	30.	76 $\frac{1}{2}$	30,1	79	78	Ditto.	Moderate wind, and fine weather.
	31.	76	30,1	77	79	Ditto.	Ditto.
Sept.	1.	74	30,12	75		East.	Ditto.
	2.	74 $\frac{1}{2}$	30,15	76 $\frac{1}{2}$	76	Ditto.	Moderate wind, and cloudy.
	3.	72	30,1	73 $\frac{1}{2}$	74	Ditto.	Moderate wind, and cloudy; rain at times.
	4.	73	30,15	74	74 $\frac{1}{2}$	S. E.	Little wind, and cloudy.
	5.		30,12	74	75 $\frac{2}{3}$	E. by N.	Ditto.
	6.	70 $\frac{3}{4}$				E. S. E.	Little wind, with flying clouds.
	7.	72 $\frac{1}{2}$	30,05	75		S. E.	Brisk wind, with flying clouds.
	8.	72 $\frac{1}{4}$	30,06	72 $\frac{1}{4}$		E. N. E.	Ditto.
	9.	74 $\frac{1}{4}$	30,11	74 $\frac{1}{2}$	71 $\frac{1}{2}$	Ditto.	{ Strong wind, and cloudy, with rain at times.
	10.	71	30,08	75	75	East.	
	11.	70 $\frac{1}{2}$	30,16	76 $\frac{1}{4}$	73	Ditto.	Brisk wind, and cloudy weather.
	12.	72 $\frac{1}{4}$	30,14	76 $\frac{1}{2}$	73 $\frac{1}{2}$	Ditto.	
	13.	72	30,1	77		Ditto.	Moderate wind, and fine weather.
	14.	74 $\frac{3}{4}$	30,07	76 $\frac{1}{2}$	79	Ditto.	Moderate wind, and cloudy weather.
	15.	74	29,92	80	83	N. E.	Little wind, and fine weather.
	16.	76	30,02	77 $\frac{1}{4}$	80 $\frac{1}{2}$	Variable.	Little wind, and hazy weather.
	17.	75	30,06	77 $\frac{1}{4}$	76 $\frac{1}{4}$	East.	Little wind, and fine weather.
	18.	75 $\frac{1}{2}$	30,15	79		Ditto.	Little wind, and cloudy; rain at times.
	19.	72	30,15	73 $\frac{1}{2}$		Ditto.	Ditto.

1774.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
♂	Sept. 20.	73	30,12	73 $\frac{1}{2}$	73	East.	Moderate wind, and fine weather.
♀	— 21.	71	30,15	73 $\frac{1}{4}$	73 $\frac{1}{4}$	Variable.	Ditto.
♂	— 22.	71 $\frac{1}{2}$	30,12	73 $\frac{1}{2}$	72 $\frac{1}{2}$	Ditto.	Ditto.
♀	— 23.	71	30,15	73	73 $\frac{1}{2}$	Ditto.	Little wind, and fine weather.
♂	— 24.	72	30,12	73	72	Ditto.	Ditto.
⊙	— 25.	71 $\frac{1}{2}$	30,15	73 $\frac{1}{2}$	74 $\frac{1}{2}$	Ditto.	Ditto.
♂	— 26.	72	30,17	73 $\frac{1}{4}$	73 $\frac{3}{4}$	S. E.	Ditto.
♀	— 27.	68 $\frac{1}{4}$	30,17	68 $\frac{3}{4}$	69	Ditto.	Brisk wind, and fine weather.
♂	— 28.	68 $\frac{1}{4}$	30,2	71	69 $\frac{1}{2}$	East.	Ditto, and cloudy, with showers.
♀	— 29.	70	30,17	74	74 $\frac{1}{2}$	Ditto.	Moderate wind, and fine weather.
♂	— 30.	71	30,05	73	75 $\frac{1}{2}$	Variable.	Little wind, and fine weather.
♂	Oct. 1.	68	29,85	70 $\frac{2}{3}$	69 $\frac{2}{3}$	South.	Brisk wind, and fine weather.
⊙	— 2.	66	29,92	66 $\frac{1}{2}$	69 $\frac{1}{2}$	S. W.	Little wind, and fine weather.
♂	— 3.	68	29,87	68 $\frac{2}{3}$	68 $\frac{1}{4}$	Ditto.	Brisk wind, in squalls, with showers.
♀	— 4.	66	29,97	69 $\frac{2}{3}$	69	West.	Squally weather, with fog and rain.
♂	— 5.	64 $\frac{1}{2}$	29,95	64 $\frac{2}{3}$	65 $\frac{2}{3}$	S. W.	Brisk wind, and fine weather.
♀	— 6.	62	30,22	65	68 $\frac{1}{2}$	Calm.	Little wind, and cloudy weather.
♂	— 7.	63	30,3	71		S. E.	Ditto.
♀	— 8.	64 $\frac{1}{4}$	30,3	65 $\frac{1}{4}$	64 $\frac{1}{2}$	Ditto.	Moderate wind, and fine weather.
⊙	— 9.	62 $\frac{1}{4}$	30,32	64 $\frac{1}{4}$	62 $\frac{1}{4}$	South.	Ditto.
♂	— 10.	61 $\frac{1}{4}$	30,25	63 $\frac{3}{4}$		S. E.	Ditto.
♀	— 11.	65	30,2	66 $\frac{1}{2}$	64 $\frac{3}{4}$	East.	Ditto.
♂	— 12.	63 $\frac{3}{4}$	30,25	66 $\frac{1}{4}$	65	N. E.	Ditto.
♀	— 13.	62	30,22	65 $\frac{1}{2}$	63	Ditto.	Ditto.
♂	— 14.	61 $\frac{1}{4}$	30,17	65 $\frac{1}{4}$	61 $\frac{1}{2}$	Ditto.	Ditto.
♀	— 15.	60	30,02	65 $\frac{1}{2}$		North.	Brisk wind, and cloudy weather.
⊙	— 16.	59 $\frac{1}{2}$	29,82	63 $\frac{1}{2}$		Variable.	Ditto, with lightning and rain.
♂	— 17.	58	29,55	59	59 $\frac{1}{2}$	West.	Strong wind, and cloudy, with showers.
♀	— 18.		29,64	55 $\frac{2}{3}$		Ditto.	Brisk wind, and cloudy.
♂	— 19.		29,87	57		S. W.	Strong gusts of wind, with rain, and cold weath.
♀	— 20.		29,97	55		Ditto.	Strong wind: weather cold and rainy.
♂	— 21.		29,19	58 $\frac{3}{4}$		Westerly.	Moderate wind, and fine weather.
♀	— 22.		29,74	61	68 $\frac{1}{2}$	S. S. E.	Ditto.
⊙	— 23.	63 $\frac{1}{2}$	30,1	65	65 $\frac{1}{2}$	Ditto.	Ditto.
♂	— 24.	65	30,04	70	64	S. W.	Ditto, and cloudy weather.
♀	— 25.	65 $\frac{2}{3}$	29,68	67 $\frac{1}{2}$		Variable.	Moderate wind, and mostly cloudy.
♂	— 26.	69 $\frac{1}{2}$	29,67	71	66 $\frac{1}{4}$	Westerly.	Ditto, and cloudy.
♀	— 27.	56	29,72	58 $\frac{3}{4}$		Ditto.	Ditto.
♂	— 28.	62 $\frac{1}{2}$	29,67	68	64	Southerly.	Ditto, and mostly cloudy, with rain.
♀	— 29.	55 $\frac{1}{2}$	29,42	58 $\frac{1}{2}$		S. E.	Ditto, and cloudy.
⊙	— 30.	55	29,43	56 $\frac{1}{2}$		Ditto.	Strong wind, and heavy rain.
♂	— 31.	63	29,6	68	67	Variable.	Moderate wind, and fine weather.
♂	Nov. 1.	63 $\frac{2}{3}$	29,7	66		S. E.	Strong wind, and fine weather.
♀	— 2.	61	29,38	65 $\frac{1}{2}$	43	S. S. W.	Brisk wind, and fine weather.
♂	— 3.	62	29,51	63	48	S. W.	Moderate wind, and fine weather.
♀	— 4.	69	29,55	72 $\frac{1}{2}$	53	Ditto.	Ditto.
♂	— 5.	62 $\frac{1}{4}$	29,75	73 $\frac{1}{2}$	66	Variable.	Brisk wind, and hazy weather.
⊙	— 6.	59 $\frac{1}{2}$	29,78	59 $\frac{1}{4}$		Ditto.	Brisk wind, and drizzling rain.

1774.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
Nov.	7.	56	29,5	58 $\frac{2}{3}$	58	Variable.	Strong wind, and heavy rain.
8.	55 $\frac{1}{2}$	29,4	64			S. W.	Brisk wind, and cloudy weather.
9.	60	29,35	62	62		Westerly.	Moderate wind; mostly cloudy, with rain.
10.	58 $\frac{1}{2}$	29,6	64 $\frac{3}{4}$			Variable.	Ditto, and cloudy weather.
11.	58	29,65	60	62 $\frac{1}{3}$		N. W.	Little wind, and cloudy.
12.	58	29,6	61 $\frac{2}{3}$	64		Westerly.	Moderate wind, and ditto.
13.	54 $\frac{3}{4}$	29,75	56			N. N. E.	Little wind, and foggy weather.
14.	54	29,42	53 $\frac{2}{3}$			Westerly.	Brisk wind, and foggy, with rain,
15.	49 $\frac{1}{2}$	29,42	51 $\frac{1}{3}$	52		Ditto.	Moderate wind, with rain.
16.	47 $\frac{3}{4}$	29,45	50	52		East.	Brisk wind, and fine weather.
17.	48 $\frac{3}{4}$	29,35	50 $\frac{1}{4}$	51		N. W.	Ditto, and cloudy, with rain.
18.	47 $\frac{2}{3}$	29,45	50 $\frac{1}{2}$			North.	Ditto, and foggy.
19.	48	29,5	49			Ditto.	Ditto.
20.	45 $\frac{2}{3}$	29,7	46			N. E.	Moderate wind, and foggy.
21.	44	28,85	43 $\frac{1}{2}$			N. W.	Strong wind, thick fog, and rain.
22.	43 $\frac{1}{2}$	29,4	44 $\frac{1}{2}$			Southerly.	Moderate wind, and foggy.
23.	43	29,45	44 $\frac{1}{2}$	48 $\frac{1}{2}$		West.	Little wind, and foggy weather.
24.	42 $\frac{1}{2}$	29,85	46			N. W.	Brisk wind, and foggy weather: Penguins.
25.	43	29,87	45 $\frac{1}{4}$	43 $\frac{1}{3}$		Ditto.	Ditto, and fine weather.
26.	43	29,85	43 $\frac{1}{2}$			Ditto.	Ditto, and foggy: Many birds.
27.	43 $\frac{1}{4}$	29,77	44 $\frac{1}{2}$	43 $\frac{1}{2}$		North.	Ditto, and cloudy.
28.	43 $\frac{1}{2}$	29,62	43 $\frac{1}{2}$			N. W.	Strong wind, with rain and thick fog.
29.	45 $\frac{1}{4}$	29,75	45 $\frac{2}{3}$			Ditto.	Moderate wind, and foggy: Sea-weed.
30.	45	29,97	47 $\frac{3}{4}$			N. E.	Little wind, and thick fog.
Dec.	1.	45	29,57	45 $\frac{3}{4}$		S. E.	Moderate wind, and foggy, with rain.
2.	44	29,47	45 $\frac{1}{4}$			Ditto.	Ditto.
3.	43	29,27	45			Ditto.	Ditto.
4.	40	29,15	41 $\frac{1}{4}$	41 $\frac{1}{4}$		S. W.	Brisk wind, and cloudy.
5.	41 $\frac{1}{2}$	29,37	43 $\frac{1}{2}$			Ditto.	Ditto, snow and rain.
6.	39 $\frac{1}{2}$	29,35	43	43		West.	Ditto, snow and hail.
7.	43	29,2	46 $\frac{1}{2}$	48		Ditto.	Moderate wind, and cloudy, with showers.
8.	43 $\frac{3}{4}$	29,05	47			N. W.	Ditto.
9.	43 $\frac{1}{2}$	28,92	47 $\frac{3}{4}$			Easterly.	Little wind, and foggy, with rain. Sea-weed.
10.	44	28,82	46 $\frac{1}{2}$	44 $\frac{1}{2}$		S. W.	Brisk wind, and cloudy: rain at times.
11.	42 $\frac{1}{2}$	28,75	44	44 $\frac{3}{4}$		West.	Ditto, and cloudy.
12.	43 $\frac{1}{3}$	28,77	44 $\frac{3}{4}$	46 $\frac{1}{2}$		Variable.	Ditto, and fine weather.
13.	52	28,75	47	45 $\frac{1}{2}$		West.	Moderate wind, and cloudy.
14.	44 $\frac{1}{2}$	28,9	46 $\frac{1}{2}$	45 $\frac{1}{2}$		Ditto.	Brisk wind, and fine weather.
15.	44 $\frac{3}{4}$	29,05	46 $\frac{3}{4}$	45 $\frac{1}{3}$		Ditto.	Ditto, and squally, with rain.
16.	44	29,17	46	46 $\frac{1}{2}$		Ditto.	Moderate wind, & fine weather, Penguins, sea-weed, & seals.
17.	45	29,17	47	47		Ditto.	Squally, with showers. Made Cape Disceada.
18.		29,4	47	50		N. W.	Brisk wind, and fine weather.
19.	45 $\frac{1}{2}$	29,55	50 $\frac{3}{4}$	48		N. E.	Little wind, and fair weather.
20.	47 $\frac{3}{4}$	29,62	54	53 $\frac{1}{2}$		East.	Ditto.
21.	52	29,52	57			N. N. W.	Wind moderate, and fine weather, but cold.
22.		29,68	58 $\frac{3}{4}$			East.	Little wind, and cloudy, with showers.
23.	47 $\frac{1}{3}$	29,89	51 $\frac{1}{2}$	49 $\frac{3}{4}$		Variable.	Moderate wind, with showers, and cloudy.
24.	46	29,82	50	49 $\frac{1}{2}$		Ditto.	Ditto, and mostly cloudy.

1774.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
○	Dec. 25.	47	29,31	53 $\frac{1}{2}$		Easterly.	Moderate wind, with rain and fleet.
▷	— 26.	47	29,57	49	49	Ditto.	Ditto, and fine weather.
♂	— 27.		29,55	51 $\frac{1}{2}$		Westerly.	Ditto, and cloudy weather.
♀	— 28.		29,7	50 $\frac{1}{2}$		S. W.	Ditto, and foggy, with rain.
⌞	— 29.	48	29,7	50 $\frac{1}{2}$	52 $\frac{3}{4}$	West.	Brisk wind, and squally, with rain.
♀	— 30.	54	29,65	56 $\frac{2}{3}$	54	N. W.	Ditto, and cloudy.
⌞	— 31.	50	29,35	52 $\frac{1}{4}$	51 $\frac{1}{2}$	W. N. W.	Ditto, and cloudy, with showers.
1775.							
○	Jan. 1.	52	29,62	54		S. W.	Ditto.
▷	— 2.	47	29,65	48 $\frac{1}{4}$	51 $\frac{1}{4}$	West.	Brisk wind, and squally weather.
♂	— 3.	49	29,62	52 $\frac{1}{2}$		Ditto.	Moderate wind, with showers.
♀	— 4.	47	29,62	51		Ditto.	Brisk wind, and cloudy : rain at times.
⌞	— 5.	43	29,6	47	45 $\frac{1}{2}$	Ditto.	Ditto.
♀	— 6.	43	29,52	41 $\frac{1}{2}$	43	Ditto.	Moderate wind, and cloudy.
⌞	— 7.	40 $\frac{1}{2}$	29,72	40 $\frac{2}{3}$	43	Ditto.	Brisk wind, and fine weather.
○	— 8.	44	29,5	49	50 $\frac{1}{2}$	North.	Moderate wind, and ditto.
▷	— 9.	43 $\frac{1}{2}$	29,35	43 $\frac{1}{2}$		N. W.	Brisk wind, and foggy. Seals and sea-weed.
♂	— 10.	43	29,15	45		West.	Moderate wind, and foggy.
♀	— 11.	42 $\frac{1}{2}$	29,2	47	45	S. W.	Ditto, and cloudy. Porpoises and birds.
⌞	— 12.	40 $\frac{1}{2}$	29,2	42 $\frac{3}{4}$		Variable.	Ditto. Penguins, seals, and sea-weed.
♀	— 13.	40	29,17	39	37	S. E.	Moderate wind, and foggy. Several penguins.
⌞	— 14.	35	29,37	37 $\frac{1}{3}$	37 $\frac{1}{2}$	Variable.	Ditto, and cold cloudy weather.
○	— 15.	34 $\frac{3}{4}$	28,7	35 $\frac{1}{4}$		S. E.	Brisk wind, with snow.
▷	— 16.	34	29,25	39 $\frac{1}{4}$		S. W.	Moderate wind, with snow and fleet.
♂	— 17.	35	29,45	39 $\frac{1}{2}$	39 $\frac{1}{3}$	Variable.	Ditto, and fine weather.
♀	— 18.	37 $\frac{1}{2}$	29,6	43	41 $\frac{1}{2}$	S. W.	Ditto.
⌞	— 19.	37 $\frac{1}{2}$	30,02	45	42	Variable.	Moderate wind, and cloudy.
♀	— 20.	39	29,72	44	39	Ditto.	Ditto.
⌞	— 21.	38	29,5	39	40	South.	Little wind, and foggy. I cannot help re- marking, that all the time we were off, and in the neighbourhood of, South Geo- rgia, whenever the Southern winds blew, the cold was much less severe than when they blew from the Northward.
○	— 22.	33 $\frac{1}{2}$	29,82	39 $\frac{1}{2}$		N. E.	Little wind, and foggy weather.
▷	— 23.	37 $\frac{1}{4}$	29,22	39		Ditto.	Ditto, and thick fog.
♀	— 24.	37	29,0	41		North.	Ditto, and foggy. Whales.
♀	— 25.	39	29,12	40 $\frac{1}{4}$	39 $\frac{1}{3}$	Ditto.	Brisk wind, and thick fog. Whales.
⌞	— 26.	42 $\frac{3}{4}$	29,2	41 $\frac{3}{4}$		N. W.	Ditto, and foggy weather. Whales & penguins.
♀	— 27.	39	29,22	39	36	North.	Moderate wind and foggy. Many whales, penguins, &c.
⌞	— 28.	34 $\frac{3}{4}$	29,12	37	33 $\frac{3}{4}$	Ditto.	Ditto, fog, rain, and fleet. Whales, pen- guins, petterals, and ice islands without number.
○	— 29.	34 $\frac{3}{4}$	29,2	39		North.	Little wind, and cloudy. Still many whales, penguins, ice islands, and birds of various sorts.
▷	— 30.	34 $\frac{2}{3}$	29,25	35		N. W.	Brisk wind, and thick fog. Much ice.
♂	— 31.	34 $\frac{2}{3}$	29,15	37	39 $\frac{1}{2}$	West.	Moderate wind, and thick fog. Saw land.
♀	Feb. 1.	33 $\frac{1}{4}$	29,17	39	35	Variable.	Little wind, and fine weather.
⌞	— 2.	34 $\frac{3}{4}$	29,2	36	37	Ditto.	Ditto, and foggy. Many penguins, &c.
♀	— 3.	34 $\frac{1}{2}$	29,0	36		S. E.	Moderate wind, and foggy.
⌞	— 4.	34 $\frac{1}{2}$	28,87	38		Ditto.	Little wind, and ditto.

ON BOARD THE RESOLUTION.

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1775.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
○	Feb. 5.	36 $\frac{1}{4}$	29,15	38 $\frac{1}{2}$	37	Westerly.	Moderate wind, and foggy. Six ice islands.
▷	— 6.	36	29,17	38		N. and W.	Brisk wind, and cloudy. Snow at times. Ice.
♂	— 7.	34 $\frac{3}{4}$	29,0	37 $\frac{1}{2}$	35 $\frac{1}{2}$	S. W.	Strong wind, and cloudy. Several ice islands.
♀	— 8.	35 $\frac{1}{2}$	29,17	37 $\frac{1}{2}$		Ditto.	Moderate wind, and cloudy. Ice islands.
⌞	— 9.	35 $\frac{1}{2}$	29,25	40	40	Variable.	Little wind, and cloudy, with snow. Ice.
♀	— 10.	33	29,32	34 $\frac{1}{2}$	34	S. W.	Brisk wind, and mostly cloudy. Ice.
h	— 11.	33 $\frac{1}{2}$	29,52	36 $\frac{2}{3}$		Variable.	Little wind, and cloudy: snow at times. Ice.
○	— 12.	32 $\frac{1}{4}$	29,17	37 $\frac{2}{3}$	35 $\frac{1}{3}$	S. E.	Little wind, and mostly cloudy. Much ice.
▷	— 13.		28,97	33		Ditto.	Moderate wind, and cloudy: snow at times.
♂	— 14.	29	28,92	32 $\frac{1}{2}$	37	S. W.	Brisk wind, and squally weather. Some ice.
Having completed 360° of Longitude, I here dropped the circle, and repeated a day.							
♂	— 14.	34 $\frac{1}{2}$	29,27	35 $\frac{1}{2}$	35 $\frac{1}{2}$	S. W.	Brisk wind, and cloudy: snow at times. Ice.
♀	— 15.	35 $\frac{1}{2}$	28,97	36 $\frac{1}{2}$		East.	Little wind, and cloudy: sometimes fleet.
⌞	— 16.	33	28,87	33	33 $\frac{1}{2}$	Southerly.	Brisk wind, with fleet. Several ice islands.
♀	— 17.	33	29,57	36	36 $\frac{1}{2}$	N. and W.	Moderate wind, and fine weather. Some ditto.
h	— 18.	33	29,47	34 $\frac{1}{2}$		North.	Brisk wind, and cloudy, with fleet. Several ditto.
○	— 19.		28,92	35 $\frac{1}{2}$		W. N. W.	Ditto, and foggy, with fleet.
▷	— 20.	34 $\frac{2}{3}$	28,95	40		Variable.	Ditto, and cloudy. Little ice.
♂	— 21.	35	29,2	37	37	Westerly.	Moderate wind, and cloudy: snow at times.
♀	— 22.	34	29,42	36		Northerly.	Brisk wind, and cloudy: snow & fleet. Whales.
⌞	— 23.	35 $\frac{1}{2}$	28,97	35 $\frac{1}{2}$		N. W.	Ditto: snow at times.
♀	— 24.	37	28,95	38 $\frac{1}{2}$		Ditto.	Strong wind, and squally weather. One ice isl.
h	— 25.	37 $\frac{1}{4}$	29,72	41		Ditto.	Moderate wind, and mostly cloudy, with fog.
○	— 26.	39 $\frac{1}{4}$	29,97	45 $\frac{1}{4}$		Ditto.	Brisk wind, and foggy. Saw sea-weed.
▷	— 27.	45	29,87	47		North.	Ditto, with rain. Penguins, &c.
♂	— 28.	48 $\frac{1}{2}$	29,90	49	43 $\frac{1}{2}$	Variable.	Moderate wind, and foggy: rain at times.
♀	March 1.	43 $\frac{1}{2}$	29,7	47		N. W.	Brisk wind, and foggy: ditto.
⌞	— 2.	45 $\frac{1}{2}$	29,62	47	43	West.	Ditto, and foggy weather.
♀	— 3.	42	30,02	44	44	N. W.	Ditto, and cloudy.
h	— 4.	51 $\frac{1}{4}$	29,92	55	57	North.	Ditto, and fine weather.
○	— 5.	53	29,5	50 $\frac{1}{2}$		N. W.	Ditto, and foggy weather.
▷	— 6.	51 $\frac{1}{2}$	29,82	52 $\frac{3}{4}$	54	West.	Ditto, and cloudy.
♂	— 7.	57	29,95	61 $\frac{1}{3}$	60 $\frac{3}{4}$	N. W.	Ditto.
♀	— 8.	61 $\frac{1}{2}$	29,87	64		North.	Moderate wind, and cloudy.
⌞	— 9.	62	29,57	63 $\frac{3}{4}$	56 $\frac{1}{2}$	West.	Moderate wind, and cloudy, with rain.
♀	— 10.	53 $\frac{3}{4}$	29,82	52 $\frac{1}{2}$	52 $\frac{1}{2}$	S. W.	Moderate wind, and cloudy.
h	— 11.	51	30,02	51 $\frac{1}{2}$		West.	Little wind, and cloudy weather.
○	— 12.	59	30,12	62	63 $\frac{1}{2}$	Variable.	Moderate wind, and ditto.
▷	— 13.	67	29,85	71	72 $\frac{1}{2}$	N. W.	Brisk wind, and squally, with showers.
♂	— 14.	70 $\frac{3}{4}$	29,65	72 $\frac{1}{2}$	70 $\frac{3}{4}$	Ditto.	Strong wind, and cloudy.
♀	— 15.	69	29,87	72 $\frac{1}{2}$	69	West.	Brisk wind, and cloudy weather.
⌞	— 16.	66	30,2	69	68 $\frac{3}{4}$	Variable.	Little wind, and fine weather.
♀	— 17.	69	30,15	70	69 $\frac{1}{2}$	Westerly.	Moderate wind, and ditto.
h	— 18.	68	30,05	70 $\frac{1}{2}$		S. W.	Ditto, and cloudy.
○	— 19.	65 $\frac{1}{2}$	30,2	65 $\frac{1}{4}$	65 $\frac{1}{4}$	S. E.	Brisk wind, and ditto.
▷	— 20.	65	30,07	66 $\frac{1}{4}$		Ditto.	Variable weather.
♂	— 21.		30,08	75	76 $\frac{1}{2}$	Ditto.	Moderate wind, and fine weather.

1775.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
March	22.		30,03	77			
u	23.						
q	24.						
h	25.			73			
o	26.	66	29,92	69 $\frac{1}{2}$			
D	27.	59	30,07	64	63 $\frac{1}{3}$		
f	28.	57 $\frac{2}{3}$	30,28	65 $\frac{1}{3}$	65		
q	29.	65 $\frac{2}{3}$	30,2	71	69 $\frac{3}{4}$		
u	30.	68 $\frac{1}{4}$	30,15	73 $\frac{1}{2}$	73		
q	31.	64 $\frac{1}{2}$	30,04	71	69 $\frac{1}{3}$		
h	April 1.	66	30,05	71 $\frac{1}{2}$	70		
o	2.	69	30,1	75	75		
D	3.	66 $\frac{1}{4}$	30,08	73 $\frac{3}{4}$			
f	4.	67 $\frac{1}{4}$	30,05	80			
q	5.	73	30,0	78 $\frac{3}{4}$	80 $\frac{1}{4}$		
u	6.	69 $\frac{1}{2}$	29,94	81	80 $\frac{1}{2}$		
q	7.	72	29,98	75			
h	8.		30,03	72			
o	9.	71 $\frac{2}{3}$	30,01	75 $\frac{1}{3}$	71		
D	10.	69 $\frac{1}{2}$	29,9	77	76		
f	11.	66	29,86	68	65 $\frac{3}{4}$		
q	12.	65	30,02	69	63 $\frac{1}{4}$		
u	13.	63 $\frac{1}{2}$	30,02	68 $\frac{1}{2}$	67 $\frac{1}{2}$		
q	14.	61 $\frac{3}{4}$	30,02	69 $\frac{1}{4}$	64		
h	15.	61	30,01	68	67		
o	16.	63 $\frac{1}{4}$	30,0	69 $\frac{3}{4}$	64		
D	17.	61 $\frac{3}{4}$	29,95	65	61 $\frac{2}{3}$		
f	18.	64 $\frac{1}{2}$	30,17	64 $\frac{1}{2}$	66		
q	19.	66	30,18	70	70 $\frac{1}{2}$		
u	20.	67	30,04	73 $\frac{1}{2}$	73 $\frac{1}{2}$		
q	21.	63 $\frac{1}{2}$	29,94	68 $\frac{3}{4}$			
h	22.	62	29,87	63 $\frac{1}{2}$			
o	23.	59 $\frac{1}{2}$	29,84	64 $\frac{3}{4}$	65		
D	24.		30,0	66			
f	25.		30,15	66			
q	26.					N. W.	Cloudy, with showers, and brisk wind.
u	27.		30,34	62		S. W. by S.	Moderate wind, and cloudy.
q	28.	63 $\frac{3}{4}$	30,32	68 $\frac{1}{2}$		South.	Brisk wind, and fine weather.
h	29.	64	30,07	66		S. S. E.	Ditto.
o	30.	62	30,15	63 $\frac{1}{4}$		Ditto.	Moderate wind, and fine weather.
D	May 1.	63 $\frac{3}{4}$	30,2	66 $\frac{1}{3}$	65	S. E. by E.	Ditto.
f	2.	64 $\frac{1}{2}$	30,05	66 $\frac{2}{3}$	66 $\frac{1}{4}$	S. E.	Ditto.
q	3.	67	30,0	69	67 $\frac{1}{2}$	Ditto.	Ditto.
u	4.	66 $\frac{1}{2}$	30,0	67 $\frac{2}{3}$	67	Variable.	Little wind, and fine weather.
q	5.	67	30,07	67		Calm.	Drizzling rain at times; but fine weather.
h	6.	64 $\frac{2}{3}$	30,15	66	67	S. S. E.	Moderate wind, and cloudy: rain at times.
o	7.	65 $\frac{1}{4}$	30,2	67 $\frac{1}{2}$	66	Ditto.	Moderate wind, and cloudy.
D	8.	65 $\frac{1}{4}$	30,2 ²	68	66 $\frac{1}{2}$	Ditto.	Ditto, and fine weather.

ON BOARD THE RESOLUTION.

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1775.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
♂	May 9.	67½	30,22	68½	68½	S. E. by S.	Moderate wind, and fine weather.
♀	10.	67½	30,17	69½		S. E.	Little wind, and cloudy.
♂	11.	68	30,15	70½	69½	East.	Little wind, and fine weather.
♀	12.	69½	30,22	72½	69	S. E.	Ditto.
♂	13.	70½	30,2	74	72½	S. E.	Ditto.
⊙	14.	69½	30,15	72½	70½	S. E.	Ditto.
♂	15.	71	30,2	72	72½	S. S. E.	Moderate wind, and cloudy.
♀	16.	73½	30,12	75½	73	S. E.	Little wind, and cloudy, with showers.
♂	17.	71	30,17	73	73½	S. E.	Brisk wind, with drizzling rain.
♀	18.		30,2	72½		S. E.	Little wind, and cloudy weather.
♂	19.			76½		S. E.	Ditto.
♀	20.			76		Variable.	Little wind, with showers.
⊙	21.					S. E.	Ditto.
♂	22.	70		70		S. E.	Moderate wind, with rain.
♀	23.	72½	30,15	74½		East.	Brisk wind, and cloudy, with showers.
♂	24.	72½	30,17	73		E. S. E.	Moderate wind, and cloudy.
♀	25.	72½	30,1	75	75	S. E. by E.	Brisk wind, and fine weather.
♂	26.	75	30,02	77½	77½	E. by S.	Moderate wind, and fine weather.
♀	27.	76½	30,02	79	79	S. E.	Ditto.
⊙	28.	77½	30,07	78½	78½	S. E.	Brisk wind, and cloudy weather.
♂	29.	76	30,02	79		S. E.	Mod. wind, flying clouds, and fine weather.
♀	30.		30,07	80½		S. E.	Ditto.
♂	31.	75½	30,1	82	80½	E. S. E.	Moderate wind, and heavy showers.
♀	June 1.	77	30,15	79½	78	S. E.	Moderate wind, and fine weather.
♂	2.	77	30,12	78½	77	S. E.	Ditto.
♀	3.	75½	30,12	78	77	S. E.	Ditto.
⊙	4.	77	30,07	79½	79½	S. E. by E.	Ditto.
♂	5.	78½	30,12	80	79	S. E. by E.	Ditto.
♀	6.	79½	30,12	81½	79½	S. E. by E.	Ditto.
♂	7.	79½	30,15	81	81	S. E. by E.	Brisk wind, and fine weather.
♀	8.	80	30,1	82½	80	E. S. E.	Ditto.
♂	9.	80½	30,02	82	81½	E. S. E.	Ditto.
♀	10.	80	30,05	82½	81	E. S. E.	Brisk wind, and cloudy.
⊙	11.	79½	30,0	81	80	E. S. E.	Squally, with heavy showers.
♂	12.	80½	30,05	81½	81	E. by S.	Ditto.
♀	13.	80	30,07	81½		East.	Moderate wind, and showers.
♂	14.	77½	30,05	79½	79½	East.	Little wind, and showers.
♀	15.	77½	30,07	78½		S. E. by E.	Ditto, and heavy rain.
♂	16.	77	30,07	81½	80½	Variable.	Ditto, and cloudy.
♀	17.	76½	30,05	79	79½	S. E.	Ditto, and hot sultry weather.
⊙	18.	76½	30,05	78	80½	Variable.	Ditto, and frequent showers.
♂	19.	79½	30,07	82	79½	N. E.	Ditto.
♀	20.	80	30,02	81	80½	N. E.	Little wind, and fine weather.
♂	21.	79½	30,05	83	81	N. E.	Brisk wind, and fine weather.
♀	22.	80	30,05	84½	80½	N. E.	Moderate wind, and fine weather.
♂	23.	78	30,02	80	80	N. E.	Ditto.
♀	24.	76½	30,1	78½	78	E. N. E.	Moderate wind, and cloudy.
⊙	25.	76	30,1	82½	79	N. E. by E.	Brisk wind, and cloudy.

1775.		Morn.	Noon.		Even.	Winds.	Weather, &c.
		Therm.	Barom.	Therm.	Therm.		
June	26.	76	30,17	78 $\frac{1}{2}$	78 $\frac{1}{2}$	N. E. by E.	Brisk wind, with showers.
♂	27.	75 $\frac{1}{2}$	30,17	78	77	E. N. E.	Moderate wind, and fine weather.
♀	28.	75	30,22	78	80	East.	Brisk wind, and cloudy: showers.
♂	29.	75 $\frac{1}{2}$	30,27	81		E. by N.	Moderate wind, and cloudy.
♀	30.	76 $\frac{1}{2}$	30,37	80 $\frac{1}{2}$	80	Ditto.	Brisk wind, and fine weather.
July	1.	74 $\frac{1}{2}$	30,45	76 $\frac{1}{2}$	76	East.	Moderate wind, and fine weather.
♂	2.	73 $\frac{1}{2}$	30,37	75	75 $\frac{1}{2}$	E. S. E.	Moderate wind, and cloudy.
♀	3.	74	30,4	74	75	Ditto.	Ditto.
♂	4.	73 $\frac{1}{2}$	30,45	75	74	East.	Ditto.
♀	5.	73	30,5	75	76	Ditto.	Little wind, and fine weather.
♂	6.	74 $\frac{1}{2}$	30,52	76 $\frac{1}{2}$	75	Calm.	Fine weather.
♀	7.	74	30,5	77 $\frac{1}{2}$	76 $\frac{1}{2}$	E. S. E.	Little wind, and fine weather.
♂	8.	74	30,42	76 $\frac{1}{2}$	79 $\frac{1}{2}$	Variable.	Ditto.
♀	9.	73 $\frac{1}{2}$	30,35	76 $\frac{1}{2}$	78 $\frac{1}{2}$	S. W.	Ditto.
♂	10.	74	30,35	76 $\frac{1}{2}$	76 $\frac{1}{2}$	Ditto.	Ditto.
♀	11.	76 $\frac{1}{2}$	30,32	76	76	S. S. W.	Brisk wind, and cloudy.
♂	12.	73	30,22	75 $\frac{1}{2}$	75	Ditto.	Ditto.
♀	13.	72	30,3	74 $\frac{1}{2}$	74	S. by W.	Moderate wind, and flying clouds.
♂	14.	71 $\frac{1}{2}$				S. W.	Ditto.
♀	15.			76 $\frac{1}{2}$		Ditto.	Brisk wind, and cloudy.
♂	16.			76 $\frac{1}{2}$		N. W.	Moderate wind, and cloudy.
♀	17.			76 $\frac{1}{2}$		West.	Ditto, and mostly cloudy.
♂	18.			77 $\frac{1}{2}$		Westerly.	Ditto, and fine weather.
♀	19.	72 $\frac{1}{2}$	30,15	78	74	S. W.	Brisk wind, and cloudy, with rain.
♂	20.	67 $\frac{2}{3}$	30,17	75 $\frac{1}{2}$	77 $\frac{1}{2}$	N. E.	Moderate wind, and mostly cloudy.
♀	21.	69 $\frac{1}{3}$	30,17	70 $\frac{1}{2}$	74	N. N. E.	Ditto, and fine weather.
♂	22.	66 $\frac{1}{4}$	30,1	74 $\frac{1}{2}$	73 $\frac{1}{2}$	N. W.	Ditto.
♀	23.	66 $\frac{1}{2}$	30,02	69 $\frac{1}{2}$	72	Ditto.	Brisk wind, and fine weather.
♂	24.	65 $\frac{1}{2}$	29,95	69 $\frac{1}{2}$	70	Ditto.	Ditto, with showers.
♀	25.	63 $\frac{1}{3}$	30,05	67	68	West.	Moderate wind, and fine weather.
♂	26.	60 $\frac{1}{2}$	29,77	64	63 $\frac{1}{2}$	Ditto.	Brisk wind, and squally.
♀	27.	62 $\frac{1}{4}$	29,72	64 $\frac{1}{2}$	69	Ditto.	Moderate wind, and fine weather.
♂	28.	61 $\frac{2}{3}$	29,75	64 $\frac{1}{2}$	65	Ditto.	Ditto.
♀	29.	61 $\frac{1}{2}$	29,85	62 $\frac{2}{3}$	64	N. W.	Brisk wind, and hazy weather.
♂	30.	60 $\frac{1}{2}$				Westerly.	Moderate wind, and fine weather.

In the preceding Journal, the civil day is to be understood; namely, from midnight to midnight. In my account of the weather, I have endeavoured to be as particular as possible, consistent with the plan I had prescribed to myself, of confining the remarks of one day to a line, except on some particular occasions, where the circumstances required, and, as I thought, merited a more ample description. And as many of the terms which I have made use of, though meant here to convey very different ideas, may be looked upon, and are really used by some persons, as synonymous; I shall here endeavour to give a short explanation of the sense I would wish them to be understood in. By the term *Fine Weather*, is to be understood such weather as was in general clear, at least where few clouds were abroad: if the word *Clear* occurs, it is to be understood that the air was at that time remarkably clear and serene. By

Flying Clouds, I express that weather where we had large clouds, obscuring a considerable part of the hemisphere; but which moved pretty quick, and did not continue long in a place. I have put *Mostly Cloudy* on those days, the greater part of which the heavens were overspread with settled clouds, but whereof some parts of the day were pretty clear. Those days are called *Cloudy* whereon the sun was but seldom, or perhaps never distinctly seen: the term also includes those days on which he was not seen at all. By the term *Showers*, I wish to express those days whereon we had alternately rain and fine weather; and by *Rain* at times, those on which the sky did not clear up between the showers, but remained settled cloudy weather. *Cloudy, with Rain*, denotes rain for the greater part of the day, at least; and also those days on which we had constant rain from the beginning to the end, of which we had some few. Those days are denominated *Hazy* on which the face of the heavens was overspread, as it sometimes is, with a thin grey cloud; or when the fine blue sky was in some measure obscured by a very thin mist. The terms *Foggy*, and *Thick Fog*, as well as the degrees of comparison which are annexed to the wind, will, I flatter myself, be sufficiently understood without farther explanation.

It may be necessary to add, that it always froze when my thermometer fell to 33° , and sometimes when it stood at $33^{\circ}\frac{1}{2}$; and, therefore, I conceive the freezing point, on that thermometer, should not be taken lower than the last-mentioned number.

ON BOARD THE RESOLUTION

When the ship was first started, the wind was light and the sea calm. The crew were all well and the ship was in good order. The first day was spent in making sail and the second day in making water. The third day was spent in making land and the fourth day in making harbor. The fifth day was spent in making provisions and the sixth day in making repairs. The seventh day was spent in making arrangements for the voyage and the eighth day in making preparations for the departure. The ninth day was spent in making the start and the tenth day in making the first day's run. The eleventh day was spent in making the second day's run and the twelfth day in making the third day's run. The thirteenth day was spent in making the fourth day's run and the fourteenth day in making the fifth day's run. The fifteenth day was spent in making the sixth day's run and the sixteenth day in making the seventh day's run. The seventeenth day was spent in making the eighth day's run and the eighteenth day in making the ninth day's run. The nineteenth day was spent in making the tenth day's run and the twentieth day in making the eleventh day's run. The twenty-first day was spent in making the twelfth day's run and the twenty-second day in making the thirteenth day's run. The twenty-third day was spent in making the fourteenth day's run and the twenty-fourth day in making the fifteenth day's run. The twenty-fifth day was spent in making the sixteenth day's run and the twenty-sixth day in making the seventeenth day's run. The twenty-seventh day was spent in making the eighteenth day's run and the twenty-eighth day in making the nineteenth day's run. The twenty-ninth day was spent in making the twentieth day's run and the thirtieth day in making the twenty-first day's run. The thirty-first day was spent in making the twenty-second day's run and the thirty-second day in making the twenty-third day's run. The thirty-third day was spent in making the twenty-fourth day's run and the thirty-fourth day in making the twenty-fifth day's run. The thirty-fifth day was spent in making the twenty-sixth day's run and the thirty-sixth day in making the twenty-seventh day's run. The thirty-seventh day was spent in making the twenty-eighth day's run and the thirty-eighth day in making the twenty-ninth day's run. The thirty-ninth day was spent in making the thirtieth day's run and the fortieth day in making the thirty-first day's run. The forty-first day was spent in making the thirty-second day's run and the forty-second day in making the thirty-third day's run. The forty-third day was spent in making the thirty-fourth day's run and the forty-fourth day in making the thirty-fifth day's run. The forty-fifth day was spent in making the thirty-sixth day's run and the forty-sixth day in making the thirty-seventh day's run. The forty-seventh day was spent in making the thirty-eighth day's run and the forty-eighth day in making the thirty-ninth day's run. The forty-ninth day was spent in making the fortieth day's run and the fiftieth day in making the forty-first day's run. The fifty-first day was spent in making the forty-second day's run and the fifty-second day in making the forty-third day's run. The fifty-third day was spent in making the forty-fourth day's run and the fifty-fourth day in making the forty-fifth day's run. The fifty-fifth day was spent in making the forty-sixth day's run and the fifty-sixth day in making the forty-seventh day's run. The fifty-seventh day was spent in making the forty-eighth day's run and the fifty-eighth day in making the forty-ninth day's run. The fifty-ninth day was spent in making the fiftieth day's run and the sixtieth day in making the fifty-first day's run. The sixty-first day was spent in making the fifty-second day's run and the sixty-second day in making the fifty-third day's run. The sixty-third day was spent in making the fifty-fourth day's run and the sixty-fourth day in making the fifty-fifth day's run. The sixty-fifth day was spent in making the fifty-sixth day's run and the sixty-sixth day in making the fifty-seventh day's run. The sixty-seventh day was spent in making the fifty-eighth day's run and the sixty-eighth day in making the fifty-ninth day's run. The sixty-ninth day was spent in making the sixtieth day's run and the seventieth day in making the sixty-first day's run. The seventy-first day was spent in making the sixty-second day's run and the seventy-second day in making the sixty-third day's run. The seventy-third day was spent in making the sixty-fourth day's run and the seventy-fourth day in making the sixty-fifth day's run. The seventy-fifth day was spent in making the sixty-sixth day's run and the seventy-sixth day in making the sixty-seventh day's run. The seventy-seventh day was spent in making the sixty-eighth day's run and the seventy-eighth day in making the sixty-ninth day's run. The seventy-ninth day was spent in making the seventieth day's run and the eightieth day in making the seventy-first day's run. The eighty-first day was spent in making the seventy-second day's run and the eighty-second day in making the seventy-third day's run. The eighty-third day was spent in making the seventy-fourth day's run and the eighty-fourth day in making the seventy-fifth day's run. The eighty-fifth day was spent in making the seventy-sixth day's run and the eighty-sixth day in making the seventy-seventh day's run. The eighty-seventh day was spent in making the seventy-eighth day's run and the eighty-eighth day in making the seventy-ninth day's run. The eighty-ninth day was spent in making the eightieth day's run and the ninetieth day in making the eighty-first day's run. The ninety-first day was spent in making the eighty-second day's run and the ninety-second day in making the eighty-third day's run. The ninety-third day was spent in making the eighty-fourth day's run and the ninety-fourth day in making the eighty-fifth day's run. The ninety-fifth day was spent in making the eighty-sixth day's run and the ninety-sixth day in making the eighty-seventh day's run. The ninety-seventh day was spent in making the eighty-eighth day's run and the ninety-eighth day in making the eighty-ninth day's run. The ninety-ninth day was spent in making the ninetieth day's run and the hundredth day in making the hundredth day's run.



A Z I M U T H S

O F T H E

S U N ' S C E N T E R ,

Taken with an A Z I M U T H C O M P A S S ;

T O G E T H E R W I T H

The Altitudes of his Lower Limb, taken at the same Time, with H A D L E Y ' s S e x t a n t ,

F O R

Determining the Variation of the M A G N E T I C N E E D L E ,

On Board His M A J E S T Y ' s Sloop R E S O L U T I O N ,

In her late Voyage on D I S C O V E R I E S towards the S O U T H .

THE UNITED STATES

OF AMERICA

DEPARTMENT OF THE INTERIOR

BUREAU OF LANDS

WASHINGTON, D. C.

1900

OFFICE OF THE ASSISTANT SECRETARY

WASHINGTON, D. C.

RECEIVED

1772.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s Center.	No. of Obs.	Vari- ation West.	Latitude North.	Longitude West.	Observers, and Remarks.
♀ June 26.	9 38 11 21 $\frac{2}{3}$ 13 9 $\frac{1}{2}$	N. 85 3 $\frac{1}{3}$ E. N. 86 23 $\frac{1}{3}$ E. N. 89 1 $\frac{1}{2}$ E.	3 3 2	20 12 $\frac{1}{3}$ 19 22 $\frac{2}{3}$ 19 47 $\frac{1}{4}$			Observed by Captain Cook. Dungeness bearing W. $\frac{1}{2}$ N. two or three leagues.
♂ — 30.	1 53 Amplit. 11 8 $\frac{2}{3}$ 12 2 $\frac{2}{3}$	N. 31 26 $\frac{2}{3}$ W. N. 27 45 W. N. 89 26 $\frac{2}{3}$ E. N. 90 35 E.	2 1 3 3	23 14 24 20 22 10 $\frac{1}{3}$ 22 13			
♂ July 1.	6 42 6 17 $\frac{2}{3}$	N. 36 40 W. N. 36 33 $\frac{1}{3}$ W.	3 3	25 3 $\frac{1}{2}$ 24 38			
♂ — 21.	12 32 21 8 $\frac{2}{3}$	N. 49 56 W. S. 77 49 E.	5 5	23 58 20 45	43 30 43 42	9 18 9 18	Mr. Gilbert.
♂ — 22.	15 23 $\frac{2}{3}$ 16 7	S. 81 16 $\frac{2}{3}$ E. S. 80 26 $\frac{2}{3}$ E.	3 3		42 41 $\frac{1}{3}$ 42 41 $\frac{1}{3}$	10 6 10 6	Mr. Gilbert.
♂ — 23.	Azim.			22 45	41 44	10 42	Mr. Gilbert.
♂ — 27.	Ditto.			20 23	33 27	15 37	Capt. Cook.
♂ Aug. 3.	Ditto.			15 50	29 5	17 40	Mr. Gilbert.
♂ — 4.	Ditto.			14 57	28 19	18 40	Observer unknown.
	Amplit.			15 0	28 19	18 40	Ditto.
♂ — 6.	Azim.			13 11	24 41	19 20	Ditto.
♀ — 7.	Ditto.			14 39	23 31	19 30	Ditto.
	Amplit.			14 40	23 31	19 30	Ditto.
☉ — 9.	12 59 $\frac{1}{2}$ 5 20 $\frac{1}{3}$ Amplit.	N. 65 50 W. N. 65 11 W. N. 63 27 W.	6 5 1	12 2 10 44 10 59	19 33 15 45 15 44	20 45 23 18 23 20	Ditto.
♂ — 18.	Azim.			9 6	11 11	21 22	Observer unknown.
♂ — 27.	6 6 16 47 $\frac{5}{7}$	N. 6 10 W. S. 85 15 E.	1 7	13 28 $\frac{1}{2}$ 13 33	4 2 3 49 $\frac{1}{2}$	11 36 10 40	
♀ — 28.	10 39 $\frac{1}{3}$ 9 20 $\frac{3}{8}$	N. 67 9 W. N. 95 28 $\frac{1}{4}$ E.	5 8	13 59 14 13	3 38 3 18	10 6 9 23	
☉ — 30.	15 22	N. 66 52 $\frac{1}{2}$ W.	2	14 57 $\frac{1}{2}$	2 34	7 3	
♂ — 31.	18 22 $\frac{3}{5}$	S. 81 57 $\frac{1}{4}$ E.	7	15 52	2 12 $\frac{1}{2}$	5 41	
♂ Sept. 3.	15 47 $\frac{2}{3}$	S. 82 46 E.	5	14 14 $\frac{1}{2}$	0 51	8 40	
♀ — 4.	6 18 $\frac{9}{10}$ Amplit.	N. 68 0 W. N. 68 30 W.	5 1	15 11 $\frac{1}{2}$ 14 43	0 45 0 44	9 15 9 17	
♂ — 7.	19 13 $\frac{1}{3}$	S. 81 37 E.	5	14 15	0 10 $\frac{1}{2}$	8 35	
♂ — 10.	14 11 $\frac{1}{2}$	S. 82 43 $\frac{1}{3}$ E.	9	12 32	2 53	11 55	
♀ — 11.	Azim. Amplit.			11 44 11 40	3 18 3 18	12 21 12 21	Observer not known.
♂ — 12.	Azim. Ditto.			12 23 12 26	4 21 4 56 $\frac{1}{2}$	13 0 14 7	
☉ — 13.	Ditto.			9 53	5 24	14 32	Ditto.
♂ — 16.	Ditto. Amplit.			7 17 7 53	9 50 9 50	18 0 18 0	Ditto.
☉ — 20.	Azim. Amplit.			5 7 4 3	16 1 16 3	20 23 20 24	
♂ — 21.	12 20	N. 90 21 E.	5	3 49	18 26	21 15	

1772.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s Center.	No of Obs.	Vari- ation West.	Latitude South.	Longitude West.	Observers, and Remarks.
Sept. 21.	Amplit.			3 43	19 2	21 46	Observer not known.
☿ — 23.	12 59 $\frac{1}{2}$	N. 82 24 $\frac{1}{2}$ W.	6	3 16	20 28	22 7	
♀ — 25.	6 38 $\frac{1}{2}$	S. 89 15 E.	4	2 8	24 6	23 32	{ By a compass of Gregory's making, which hung on friction wheels.
	9 59 $\frac{1}{2}$	S. 90 35 $\frac{1}{2}$ E.	7	2 19	24 6	23 32	By a Knight's compass.
♂ — 26.	10 25 $\frac{3}{4}$	S. 95 1 W.	5	2 1 $\frac{1}{2}$	24 25	23 51	Mr. Pickersgill.
	9 7 $\frac{3}{4}$	S. 94 17 W.	5	1 53	24 25	23 51	
	Amplit.	N. 92 40 W.	1	0 50	24 25	23 51	Mr. Pickersgill.
	15 23	S. 94 32 E.	5	0 39	24 40 $\frac{1}{2}$	23 51 $\frac{1}{2}$	
☉ — 27.	20 0 $\frac{2}{3}$	S. 95 30 W.	7	2 5	24 51 $\frac{1}{2}$	23 51	
	Amplit.	S. 89 0 W.	1	1 15	24 52	23 51	Mr. Gilbert.
	Ditto M.		1	1 11	25 12	23 31	Ditto.
♂ — 28.	8 50 $\frac{1}{2}$	S. 88 50 E.	5	2 36 $\frac{1}{2}$	26 46 $\frac{1}{2}$	20 36	
♀ — 30.	8 57 $\frac{3}{4}$	S. 87 36 E.	5	3 14 $\frac{2}{3}$	27 20	18 36	
♂ Oct. 1.	5 38 $\frac{1}{2}$	N. 87 0 W.	3		27 28	17 59	
	6 56 $\frac{2}{3}$	S. 84 1 $\frac{1}{2}$ E.	9		27 31	17 34	
♂ — 5.	9 11 $\frac{3}{4}$	N. 84 33 $\frac{1}{2}$ W.	9	6 13	28 59 $\frac{1}{2}$	11 30	
♂ — 10.	15 0 $\frac{1}{8}$	N. 79 39 $\frac{1}{4}$ W.	7	8 30 $\frac{1}{2}$	34 30 $\frac{1}{2}$	8 8	
☉ — 11.	Azim.			8 30	34 47 $\frac{1}{2}$	6 48	Observer not known.
♂ — 12.	16 9 $\frac{1}{2}$	N. 79 39 $\frac{1}{4}$ W.	7	8 30 $\frac{1}{4}$	34 52 $\frac{1}{2}$	6 24	
						East.	
♂ — 17.	15 54 $\frac{3}{4}$	N. 76 30 $\frac{1}{2}$ W.	7	14 9 $\frac{1}{2}$	35 0	4 40	
♂ — 19.	22 45 $\frac{1}{2}$	N. 71 49 W.	5	15 9 $\frac{1}{2}$	34 24	7 40	Obs. by the shadow of the thread.
	16 56 $\frac{1}{2}$	N. 75 37 W.	5	15 23	34 24	7 40	By looking at the sun.
♂ — 20.	14 42 $\frac{1}{4}$	N. 75 55 W.	8	16 56 $\frac{1}{2}$	34 57	7 55 $\frac{1}{2}$	
	14 4 $\frac{2}{3}$	S. 71 34 $\frac{1}{2}$ E.	6	14 59	35 19	7 35	
♀ — 21.	11 54	N. 79 8 W.	7	15 56	35 52	7 36	
♂ — 26.	Azim.			20 57	34 25 $\frac{1}{2}$	14 50	Observer not known.
	Ditto.			21 26 $\frac{1}{2}$	33 40	15 10	Ditto.
♂ — 27.	26 2 $\frac{3}{4}$	N. 67 5 W.	5	21 34	33 41	15 38	
♀ — 28.	18 5 $\frac{2}{3}$	N. 73 14 $\frac{1}{2}$ W.	7	21 30	33 45 $\frac{1}{2}$	15 42	
♀ Nov. 27.	23 17 $\frac{2}{3}$	N. 79 37 W.	5	19 7	40 19 $\frac{1}{8}$	16 27	Mr. Gilbert.
	20 14 $\frac{2}{3}$	N. 81 15 W.	5	19 55	40 20	16 27	
♀ Dec. 4.	14 43 $\frac{3}{8}$	S. 56 43 $\frac{1}{2}$ E.	8	16 4 $\frac{1}{2}$	46 42 $\frac{1}{8}$	18 10	Mr. Pickersgill.
	15 15 $\frac{1}{2}$	S. 57 18 $\frac{1}{2}$ E.	3	16 31 $\frac{1}{2}$	46 42 $\frac{1}{8}$	18 10	
☉ — 6.	19 55 $\frac{4}{5}$	N. 83 57 $\frac{6}{7}$ W.	7	17 51 $\frac{1}{2}$	48 48	18 16	
	15 51 $\frac{1}{2}$	N. 87 39 $\frac{2}{7}$ W.	7	18 38 $\frac{1}{2}$	48 48	18 16	
♀ — 9.	10 18 $\frac{3}{8}$	S. 49 45 $\frac{5}{8}$ E.	6	16 32	50 42	21 8	
	11 50 $\frac{5}{8}$	S. 51 46 $\frac{1}{4}$ E.	8	16 26	50 42	21 8	
♀ — 16.	34 55 $\frac{1}{2}$	S. 76 49 E.	5	22 9 $\frac{1}{2}$	55 8 $\frac{1}{2}$	23 44	
♂ — 17.	5 2 $\frac{9}{10}$	S. 76 23 W.	10	21 9 $\frac{1}{2}$	55 8 $\frac{1}{2}$	24 17	
♂ — 19.	12 8 $\frac{1}{4}$	N. 89 1 $\frac{1}{2}$ W.	10	22 26 $\frac{1}{2}$	54 15	25 56	
♂ — 21.	16 1 $\frac{1}{4}$	N. 86 1 $\frac{1}{4}$ W.	8	21 47 $\frac{1}{2}$	54 40 $\frac{1}{2}$	29 45	
♂ — 22.	5 32 $\frac{4}{5}$	S. 31 58 E.	5	23 56	55 17	31 58	Mr. Clerke.
♂ — 26.	17 58	N. 85 42 W.	5	19 37	58 32 $\frac{2}{3}$	26 24	
	13 9 $\frac{4}{5}$	S. 86 4 W.	5	19 14	58 32 $\frac{2}{3}$	26 20	

ON BOARD THE RESOLUTION.

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1773.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s Center.	No. of Cubf.	Vari- ation West.	Latitude South.	Longitud East.	Observers, and Remarks.
h Jan. 2.	19 42	N. 89 18 W.	5	12 16½	58 51	10 34	Mr. Gilbert.
	16 11	S. 84 45 W.	5	12 3	58 50½	10 33	
	15 14½	S. 84 42 W.	5	13 33	58 50½	10 33	Mr. Clerke.
	13 14	S. 79 52 W.	5	11 55½	58 50	10 32	Capt. Cook.
u — 7.	9 36	S. 32 41½ E.	3	28 19	61 9	31 42	
	13 35½	S. 39 8½ E.	4	28 53	61 10	31 47	
♀ — 8.	10 10½	S. 32 30 E.	6	29 42	61 30	34 40	
○ — 10.	5 51¼	S. 29 19½ E.	7	22 50½	62 44	37 25	Mr. Pickersgill.
	13 53½	S. 43 59½ E.	9	25 30½	62 47½	37 27	Mr. Cooper.
D — 11.	8 8½	S. 32 26 E.	5	23 47	64 11½	38 22	Gregory's Compass.
	8 48½	S. 34 33 E.	5	23 12			A Knight's ditto.
	9 55½	S. 36 53 E.	7	23 33			Gregory's ditto.
	10 43½	S. 37 30 E.	5	24 44			Another Knight's.
u — 14.	19 51	N. 69 30 W.	3	28 0	63 53	39 20	Gregory's Compass.
	19 11	N. 70 0 W.	5	28 10			A Knight's ditto.
	18 15	N. 72 22 W.	4	28 22			Another Knight's
h — 16.	20 5½	N. 68 49 W.	5	27 9	64 55	39 10	Capt. Cook.
	18 10½	N. 72 49½ W.	6	27 12	64 55½		
u — 21.	20 15½	N. 62 31½ W.	7	31 13	62 28½	42 6	Mr. Gilbert.
	19 23½	N. 64 4 W.	5	31 23			
	18 39	N. 64 27 W.	5	32 23			
♀ — 22.	24 8	S. 60 19½ E.	10	33 1½	60 27	45 12	Mr. Clerke.
○ — 24.	8 48½	N. 76 13½ W.	3	35 30	57 50½	49 52	Capt. Cook.
	4 39½	N. 84 39½ W.	5	34 14½	57 48		Mr. Gilbert.
♀ — 27.	17 2½	N. 65 56 W.	10	31 24½	56 6½	51 35	Mr. Pickersgill.
	14 57½	N. 69 0½ W.	11	31 22½	56 6½		Capt. Cook. Greg. Comp.
	10 4½	N. 74 7½ W.	4	33 31½	56 6½		Mr. Clerke. Ditto.
	8 0	N. 76 0 W.	1	33 4	53 49		Mr. Gilbert. A Knight's dit.
u — 28.	Amplit.	N. 86 37½ W.	1	30 49	50 13	52 31	
○ — 31.	18 44½	N. 65 55½ W.	7	27 52½	49 7	60 24	Capt. Cook.
○ Feb. 2.	15 35½	N. 69 33½ W.	7	27 48			Ditto.
	14 35½	N. 71 29 W.	5	27 2			Mr. Clerke.
	12 53½	N. 72 57½ W.	2	27 27½			
	12 27½	S. 46 39½ E.	6	32 40	48 48	61 20	
	13 42	S. 48 24½ E.	6	32 20			Mr. Pickersgill.
u — 4.	14 10	N. 70 12½ W.	9	27 54½	49 37½	59 25	
	5 13	N. 75 25½ W.	7	33 8½	49 37½	59 22	
♀ — 5.	12 43½	N. 68 37½ W.	9	30 37½	48 34	59 6	Capt. Cook.
	11 34	N. 69 16½ W.	4	31 16½	48 8½	60 25	
h — 6.	3 8½	N. 77 12½ W.	11	32 24½			Capt. Cook.
○ — 7.	6 55½	N. 73 51½ W.	8	31 8	49 8½	63 8	
♂ — 9.	18 18½	S. 62 2 E.	9	27 33	49 50	65 10	Capt. Cook.
♀ — 12.	12 40½	N. 62 53½ W.	8	32 33	53 6½	71 25	Mr. Gilbert.
	12 39½	S. 50 17½ E.	7	34 45½	53 32	72 57	Mr. Cooper.
	13 32	S. 52 51½ E.	7	33 10½			Mr. Gilbert.
○ — 14.	20 0½	N. 46 33½ W.	7	36 12	55 40½	74 50	Capt. Cook.

1773.	Altitude of the ☉ L. L.	Magnetic Azimuth of the ☉'s Center.	N. of Obs.	Variation West.	Latitude South.	Longitude East.	Observers, and Remarks.
Feb. 15.	18 27 $\frac{1}{2}$	N. 45 0 W.	6	39 11	57 4	80 9	
	12 19	N. 56 49 $\frac{1}{2}$ W.	8	36 53 $\frac{1}{2}$	57 6	80 12	Mr. Gilbert.
	11 28	N. 56 40 W.	6	38 22	57 6	80 12	Mr. Pickersgill.
— 17.	4 39	S. 33 50 E.	4	45 45	57 54	83 6	Ditto.
	33 14 $\frac{1}{2}$	S. 87 23 E.	11	39 35	57 54 $\frac{1}{2}$	83 40	Capt. Cook.
— 18.	17 57 $\frac{1}{2}$	N. 44 45 W.	5	37 44	58 2 $\frac{1}{2}$	84 42	Mr. Pickersgill.
	16 59	N. 45 20 W.	6	38 45	58 2 $\frac{2}{3}$	84 42	
	14 32 $\frac{1}{2}$	N. 48 6 W.	5	39 58	58 5	84 48	Capt. Cook.
	4 57 $\frac{1}{2}$	N. 62 26 $\frac{1}{2}$ W.	3	37 8 $\frac{1}{2}$	58 5	84 48	Mr. Clerke.
— 19.	8 27 $\frac{1}{2}$	S. 42 15 E.	5	40 53	58 49	91 2	
	10 24 $\frac{1}{2}$	S. 43 32 E.	5	42 49 $\frac{1}{2}$	58 49	91 2	
— 20.	11 26 $\frac{1}{2}$	N. 51 20 $\frac{2}{3}$ W.	9	40 13	58 46 $\frac{1}{8}$	91 58	Capt. Cook.
	9 8 $\frac{2}{3}$	N. 54 33 W.	5	40 49	58 46	91 59	Mr. Clerke.
	13 42	S. 57 18 $\frac{1}{3}$ E.	6	35 17	58 55 $\frac{1}{3}$	92 45	Mr. Pickersgill.
	14 33 $\frac{4}{5}$	S. 58 6 E.	5	35 56 $\frac{1}{2}$	58 55 $\frac{1}{3}$	92 45	Mr. Gilbert.
— 21.	21 9 $\frac{5}{8}$	S. 65 57 $\frac{1}{2}$ E.	4	40 58 $\frac{1}{4}$	59 19	93 55	
— 25.	12 26 $\frac{1}{2}$	N. 43 14 $\frac{2}{7}$ W.	7	42 29 $\frac{1}{4}$	60 49 $\frac{2}{3}$	96 10	Capt. Cook.
	11 8	N. 44 16 W.	7	43 45	60 49 $\frac{2}{3}$	96 10	Mr. Clerke.
	7 41 $\frac{7}{10}$	S. 44 56 E.	10	41 23	60 58	97 26	Mr. Burr.
	8 46 $\frac{1}{3}$	S. 47 36 E.	6	40 31	60 58	97 26	Mr. Gilbert.
	9 35 $\frac{5}{8}$	S. 48 19 E.	5	41 17 $\frac{1}{2}$	60 58	97 26	Ditto.
March 3.	22 27	N. 22 21 $\frac{3}{7}$ W.	7	39 15 $\frac{1}{2}$	60 12 $\frac{1}{4}$	110 52	
— 6.	15 11 $\frac{1}{3}$	N. 41 47 $\frac{1}{8}$ W.	7	32 11	59 56 $\frac{1}{3}$	119 7	Mr. Gilbert.
— 7.	10 6 $\frac{6}{7}$	S. 69 25 $\frac{7}{8}$ E.	7	28 32	59 44	121 18	
	13 53 $\frac{3}{4}$	S. 73 1 $\frac{1}{2}$ E.	4	31 47	59 44	121 18	
— 8.	11 17 $\frac{1}{4}$	N. 53 25 W.	8	26 12	59 44	121 20	Gregory's Compass. } Capt.
	9 54 $\frac{1}{3}$	N. 53 40 W.	5	28 25	59 44	121 20	Knight's ditto. } Cook.
— 10.	10 29 $\frac{1}{3}$	S. 88 26 $\frac{2}{3}$ E.	3	11 39 $\frac{1}{3}$	57 52 $\frac{1}{3}$	130 2	Mr. Pickersgill.
	12 16 $\frac{1}{2}$	S. 89 37 $\frac{1}{2}$ E.	4	13 38 $\frac{1}{2}$	57 52 $\frac{1}{3}$	130 2	
	14 12 $\frac{1}{2}$	S. 92 52 E.	5	13 29	57 52 $\frac{1}{3}$	130 2	
— 11.	10 45	N. 86 32 $\frac{1}{7}$ E.	7	8 24	58 55 $\frac{1}{2}$	131 38	Greg. Comp. Ship's head N.
	14 16	N. 83 36 $\frac{2}{3}$ E.	3	11 46	58 55 $\frac{1}{2}$	131 38	Knight's ditto. Ship's head S.
	14 58 $\frac{1}{7}$	N. 82 30 $\frac{5}{7}$ E.	7	11 57 $\frac{1}{2}$	58 55 $\frac{1}{2}$	131 38	Gregory's ditto. Ship's head south'y.
	17 40	N. 71 40 E.	2	6 18 $\frac{1}{2}$	58 55 $\frac{1}{2}$	131 38	Ditto. Ship's head northerly.
	19 26 $\frac{2}{3}$	N. 70 50 E.	3	9 4 $\frac{1}{2}$	58 55 $\frac{1}{2}$	131 38	Knight's ditto. Ship's head south'y.
— 13.	13 59	N. 63 50 W.	3	7 37	58 44 $\frac{1}{2}$	133 50	Ship's head S. S. E.
	13 19	N. 62 6 $\frac{2}{3}$ W.	3	10 35	58 44 $\frac{1}{2}$	133 50	Ship's head N. E.
— 15.	27 42 $\frac{1}{4}$	N. 36 38 $\frac{1}{4}$ E.	4	0 55 $\frac{1}{2}$	58 52 $\frac{1}{6}$	142 24	Capt. Cook.
	28 18 $\frac{2}{3}$	N. 36 0 E.	6	2 29 $\frac{1}{4}$	58 52 $\frac{1}{6}$	142 24	
				East.			
— 16.	11 40 $\frac{1}{4}$	N. 73 30 W.	4	0 27	58 53	143 55	Capt. Cook.
— 18.	14 34	N. 82 46 $\frac{2}{3}$ W.	9	14 12	56 7 $\frac{2}{3}$	150 10	Ditto.
	10 7	S. 91 0 W.	3	13 4 $\frac{1}{2}$	56 5	150 10	Mr. Gilbert.
	9 34 $\frac{1}{2}$	S. 85 53 $\frac{1}{4}$ W.	4	17 19	56 3 $\frac{2}{3}$	150 10	Capt. Cook.
	8 17	S. 86 50 W.	1	14 21 $\frac{1}{2}$	56 3	150 10	Ditto.
— 20.	14 29 $\frac{9}{10}$	N. 83 33 $\frac{2}{3}$ W.	5	13 41	52 48	154 56	Mr. Gilbert.

ON BOARD THE RESOLUTION.

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1773.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s center.	No. of Obs.	Vari- ation East.	Latitude South.	Longitude East.	Observers and Remarks.
h March 20.	13 24 $\frac{1}{10}$	N. 84 14 W.	5	12 43	52 47 $\frac{1}{3}$	154 56	Mr. Pickersgill. Mr. Gilbert.
	12 20 $\frac{1}{3}$	N. 87 56 W.	5	14 52	52 47		
D — 22.	16 58 $\frac{1}{2}$	N. 81 3 $\frac{1}{2}$ W.	3	13 32	49 28 $\frac{1}{2}$	159 38	Ditto.
	14 19 $\frac{1}{8}$	N. 85 45 $\frac{2}{3}$ W.	3	14 37			
	12 35 $\frac{1}{4}$	N. 87 56 $\frac{1}{4}$ W.	4	14 31			
	11 10 $\frac{1}{10}$	N. 88 29 W.	5	13 14			
☉ — 23.	15 10 $\frac{2}{3}$	N. 83 3 $\frac{1}{2}$ W.	3	12 19 $\frac{1}{3}$	47 29	161 54	Mr. Clerke. Mr. Gilbert.
	12 49	N. 87 32 $\frac{1}{2}$ W.	6	13 54	47 28		
☉ — 24.	18 53 $\frac{1}{3}$	N. 78 18 $\frac{3}{4}$ W.	4	12 7	46 23 $\frac{1}{2}$	163 55	Mr. Gilbert.
	17 58 $\frac{1}{4}$	N. 78 48 W.	5	11 26	46 23 $\frac{1}{3}$		
D June 14.	12 21 $\frac{1}{4}$	N. 22 36 $\frac{2}{3}$ E.	3	11 43	46 41 $\frac{1}{3}$	185 50	Ship's head East; Ditto, South.
☉ — 15.	8 45 $\frac{1}{12}$	N. 52 27 $\frac{1}{7}$ W.	7	11 16	46 52 $\frac{1}{4}$	186 4	
☉ — 22.	9 44 $\frac{1}{3}$	N. 51 25 W.	6	9 3 $\frac{1}{2}$	44 37 $\frac{1}{2}$	196 30	
☉ — 23.	8 34 $\frac{2}{7}$	N. 55 35 W.	7	11 21	44 37 $\frac{1}{2}$	197 53	
D — 28.	4 7 $\frac{1}{4}$	N. 45 50 E.	1		42 37 $\frac{1}{2}$	198 39	
	12 51 $\frac{2}{3}$	N. 32 18 $\frac{1}{3}$ E.	3	7 54 $\frac{2}{3}$	42 39 $\frac{1}{3}$	198 42 $\frac{1}{2}$	
☉ — 29.	3 46 $\frac{2}{3}$	N. 45 19 E.	5	7 40	43 5	199 40	
	11 14	N. 33 41 E.	5	8 45	43 5 $\frac{1}{2}$	199 45	
h July 1.	11 51 $\frac{1}{3}$	N. 48 25 W.	5	6 55	43 7 $\frac{1}{2}$	201 58 $\frac{1}{2}$	
	6 25	N. 40 44 $\frac{1}{8}$ E.	6	6 59 $\frac{1}{2}$	43 2 $\frac{1}{2}$	203 8	
☉ — 2.	7 57	N. 55 45 W.	6	5 59	43 2 $\frac{1}{2}$	203 20	
	10 33 $\frac{2}{3}$	N. 36 28 E.	5	7 10 $\frac{1}{2}$	43 14	204 23	
h — 3.	8 27 $\frac{4}{5}$	N. 54 58 W.	5	8 13	43 22 $\frac{2}{3}$	204 58	
☉ — 9.	8 47 $\frac{4}{5}$	N. 44 27 $\frac{4}{5}$ E.	9	2 47 $\frac{1}{2}$	43 27 $\frac{1}{2}$	215 20	
h — 10.	15 41 $\frac{3}{5}$	N. 31 43 $\frac{3}{5}$ E.	7	4 5	43 33 $\frac{1}{2}$	217 50	
☉ — 11.	11 41 $\frac{1}{2}$	N. 48 44 W.	5	5 35 $\frac{1}{2}$	43 32 $\frac{1}{3}$	218 30	
	12 41	N. 36 30 $\frac{2}{3}$ E.	7	5 35	43 17 $\frac{2}{3}$	219 26	
D — 12.	8 14	N. 53 59 $\frac{1}{8}$ W.	6	5 4	43 14 $\frac{1}{3}$	219 57	
h — 17.	8 4 $\frac{3}{5}$	N. 48 40 E.	7	6 16	38 4 $\frac{2}{3}$	226 32	
☉ — 18.	11 17 $\frac{9}{10}$	N. 56 43 $\frac{4}{7}$ W.	7	5 5	37 49	226 46	
D — 19.	9 36 $\frac{1}{3}$	N. 65 22 $\frac{2}{3}$ W.	7	5 33 $\frac{1}{2}$	36 25 $\frac{1}{3}$	227 5	
	14 53 $\frac{2}{3}$	N. 43 54 E.	5	6 5 $\frac{1}{2}$	35 35	226 57	
☉ — 21.	15 23 $\frac{3}{8}$	N. 48 56 $\frac{2}{3}$ E.	3	4 51 $\frac{1}{2}$	31 18 $\frac{1}{2}$	225 40	
h — 22.	12 55 $\frac{1}{2}$	N. 61 50 W.	6	5 21 $\frac{1}{2}$	30 47 $\frac{5}{8}$	225 31	
	8 40 $\frac{2}{3}$	N. 55 11 $\frac{3}{7}$ W.	7	5 34	29 34	225 6	
D — 26.	10 17 $\frac{1}{2}$	N. 66 20 W.	5	5 24 $\frac{2}{3}$	28 43	224 41	
	10 43 $\frac{1}{10}$	N. 56 7 E.	5	4 59 $\frac{1}{3}$	28 1	224 55	
☉ — 27.	11 1 $\frac{7}{8}$	N. 55 0 E.	4	6 18 $\frac{1}{2}$	27 43	224 41	
☉ Aug. 1.	11 15 $\frac{4}{7}$	N. 59 22 E.	7	5 16 $\frac{1}{3}$	23 25	226 3	Mr. Gilbert.
D — 2.	8 43 $\frac{4}{5}$	N. 62 18 E.	5	4 26	22 22	226 15	
☉ — 3.	12 7 $\frac{1}{8}$	N. 70 12 W.	5	5 1 $\frac{1}{3}$	22 0	226 16	
☉ — 4.	13 46 $\frac{2}{3}$	N. 70 6 W.	5	5 10	21 12	226 30	
☉ — 10.	13 53 $\frac{1}{2}$	N. 62 8 $\frac{1}{3}$ E.	3	6 30	17 17 $\frac{1}{3}$	218 15	
h — 12.	16 6 $\frac{2}{3}$	N. 61 35 $\frac{2}{3}$ E.	7	6 45	17 16 $\frac{1}{4}$	215 24	
h — 14.	10 57	N. 63 41 E.	5	7 24	17 42 $\frac{1}{4}$	211 50	
☉ — 24.	9 17 $\frac{1}{3}$	N. 69 27 E.	5	5 54 $\frac{1}{2}$	17 29	210 40	

1773.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s center.	Z of ☉	Vari- ation East.	Latitude South.	Longitude East.	Observers and Remarks.
☉ Sept. 5.	8 38 $\frac{1}{2}$	N. 85 2	W.	5 4 51 $\frac{1}{2}$	16 44 $\frac{1}{2}$	208 52 $\frac{2}{3}$	Knight's compass.
	6 33 $\frac{1}{2}$	N. 85 40	W.	3 4 50	16 44 $\frac{1}{2}$	208 52 $\frac{2}{3}$	Gregory's ditto.
☉ — 18.	7 54 $\frac{3}{4}$	N. 77 20	E.	5 8 26 $\frac{1}{3}$	17 34	206 10	Mr. Gilbert.
☉ — 19.	14 4	S. 87 36	W.	5 8 36 $\frac{1}{3}$	17 47	205 20	Ditto.
	12 11 $\frac{1}{2}$	S. 87 15	W.	5 8 18			
☉ — 21.	19 16 $\frac{7}{8}$	S. 88 12	W.	5 9 18	18 28 $\frac{1}{2}$	203 47	Mr. Gilbert.
	8 34 $\frac{9}{10}$	S. 84 33	W.	5 9 6 $\frac{1}{2}$	18 29 $\frac{1}{2}$		
	15 17 $\frac{1}{2}$	N. 75 39	E.	5 8 34 $\frac{1}{3}$	18 36	203 15	Mr. Gilbert.
	17 5	N. 75 36	E.	5 7 58	18 36 $\frac{1}{2}$		
☉ — 26.	12 14	N. 75 17	E.	5 11 42	20 36	194 36	
☉ — 27.	17 45 $\frac{1}{3}$	N. 74 23	E.	5 9 44	20 58 $\frac{1}{2}$	192 5	Mr. Gilbert.
☉ — 29.	4 6 $\frac{7}{8}$	S. 78 11	W.	5 10 42 $\frac{1}{2}$	21 26 $\frac{1}{3}$	189 38	
Time by Watch							
H "							
☉ Oct. 3.	7 5 16	N. 76 32 $\frac{1}{8}$	E.	7 10 28	21 4 $\frac{1}{2}$	185 3 $\frac{1}{2}$	
Alt. ☉'s L. L.							
☉ — 7.	14 27 $\frac{2}{3}$	S. 78 50	W.	5 10 44	21 10	185 2	
	19 35 $\frac{1}{3}$	N. 76 47 $\frac{5}{8}$	E.	7 11 35	21 56	184 45	
☉ — 8.	13 47 $\frac{3}{4}$	S. 79 27	W.	5 9 50 $\frac{1}{2}$	22 6 $\frac{1}{2}$	184 40	
☉ — 13.	16 20 $\frac{1}{2}$	N. 78 56 $\frac{7}{8}$	E.	8 10 39	28 27	180 13	Mr. Pickersgill.
	17 29 $\frac{3}{8}$	N. 79 7	E.	5 10 39			Mr. Gilbert.
☉ — 14.	10 24 $\frac{5}{8}$	N. 82 31	E.	5 11 34 $\frac{1}{3}$	29 47	179 56	
☉ — 15.	12 39 $\frac{1}{2}$	S. 76 33 $\frac{1}{7}$	W.	7 10 52	30 36	179 57	
	11 27 $\frac{3}{4}$	N. 82 56 $\frac{2}{3}$	E.	6 10 26 $\frac{1}{3}$	31 16 $\frac{1}{3}$	179 56	Mr. Clerke.
	12 36 $\frac{9}{10}$	N. 81 12	E.	5 11 28			
☉ — 16.	17 4 $\frac{1}{6}$	S. 79 18 $\frac{1}{3}$	W.	6 10 43 $\frac{2}{3}$	32 0 $\frac{1}{10}$	179 55	Mr. Clerke.
	15 29 $\frac{2}{3}$	S. 77 13	W.	5 11 48 $\frac{1}{2}$			Mr. Gilbert.
☉ — 17.	6 30 $\frac{2}{3}$	S. 71 31 $\frac{2}{3}$	W.	6 10 33	32 52 $\frac{1}{3}$	179 56	
	12 51 $\frac{9}{10}$	N. 82 0	E.	6 11 0	33 24	180 12	
☉ — 20.	14 14 $\frac{3}{4}$	N. 76 59 $\frac{1}{8}$	E.	6 15 12	38 54 $\frac{1}{2}$	179 12	Mr. Gilbert.
☉ Nov. 27.	13 34 $\frac{1}{2}$	S. 59 37 $\frac{1}{2}$	W.	5 13 57 $\frac{1}{2}$	44 3	176 5	Capt. Cook.
	11 32	S. 59 48	W.	5 11 51			Ditto.
☉ — 28.	15 15 $\frac{1}{6}$	S. 61 0	W.	5 13 56	44 28	176 45	
☉ Dec. 4.	11 39 $\frac{2}{3}$	S. 86 58	E.	5 17 51 $\frac{1}{2}$	50 4 $\frac{2}{3}$	179 59	
☉ — 5.	21 47 $\frac{3}{8}$	S. 62 35	W.	6 18 16 $\frac{1}{2}$	50 18 $\frac{2}{3}$	179 44	
☉ — 7.	23 20 $\frac{4}{5}$	S. 66 36	W.	5 19 27	53 45	180 43	Mr. Pickersgill.
	22 0	S. 67 42 $\frac{1}{2}$	W.	6 15 19	53 46		Mr. Gilbert.
☉ — 11.	28 2 $\frac{1}{3}$	S. 78 0 $\frac{1}{2}$	W.	10 15 4 $\frac{1}{2}$	61 13 $\frac{2}{3}$	187 45	
☉ — 12.	12 34 $\frac{2}{3}$	S. 46 39	W.	5 16 49 $\frac{1}{2}$	63 10 $\frac{2}{3}$	190 55	Mr. Pickersgill.
	12 1 $\frac{9}{10}$	S. 44 49 $\frac{1}{8}$	W.	6 17 30	63 10 $\frac{1}{2}$		
☉ — 18.				10 18	64 26	209 13	Log Book.
☉ — 19.	23 54 $\frac{1}{6}$	S. 73 38 $\frac{1}{2}$	W.	10 12 8	64 53 $\frac{5}{8}$	211 45	
☉ — 24.	24 37 $\frac{1}{5}$	S. 69 21	W.	10 18 46	67 4	223 20	Gregory's compass.
	23 10 $\frac{9}{10}$	S. 69 13	W.	10 15 32			Knight's ditto.

Uncertain because
of ship's motion.

1773.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s center.	No. of Obs.	Vari- ation East.	Latitude South.	Longitude East.	Observers and Remarks.
○ Dec. 26.	22 41 $\frac{1}{10}$	S. 67 53 $\frac{3}{4}$ W.	6	15 40	66 5	226 30	Gregory's compass.
	22 7 $\frac{1}{4}$	S. 66 15 $\frac{3}{8}$ W.	6	15 40	66 5	226 30	Knight's ditto.
☿ — 29.	21 23 $\frac{2}{3}$	S. 66 17 W.	10	14 29	62 8	225 58	Ditto.
☿ — 30.	19 45 $\frac{1}{3}$	S. 64 16 $\frac{1}{2}$ W.	10	13 43 $\frac{1}{4}$	61 7	225 22	Ditto: cloudy.
☿ — 31.	19 27 $\frac{1}{8}$	S. 71 23 $\frac{1}{2}$ W.	10		59 38	225 14	Ship's head E. } Knight's Ditto, N. W. } compass.
	8 33 $\frac{3}{4}$	S. 46 19 $\frac{1}{2}$ W.	10	12 2 $\frac{1}{2}$	59 36 $\frac{1}{3}$		
1774.							
☿ Jan. 1.	15 41 $\frac{1}{2}$	S. 57 30 $\frac{1}{2}$ W.	10	14 4	58 47	224 3	Ship's head, N. W. K's comp.
	15 21 $\frac{3}{5}$	S. 84 26 E.	10	13 27	58 4	223 22	Knight's compass.
☿ — 6.	18 14 $\frac{1}{4}$	S. 69 35 W.	4	7 7 $\frac{1}{2}$	51 40	225 6	Cloudy, and much motion.
☿ — 7.	13 28 $\frac{2}{3}$	S. 64 39 $\frac{3}{8}$ W.	8	6 32	50 17	227 20	
	12 59 $\frac{2}{5}$	S. 77 18 E.	5	6 26	49 37	229 50	Mr. Clerke.
☿ — 11.	13 41 $\frac{9}{10}$	S. 69 54 $\frac{2}{3}$ W.	9	2 41	48 21 $\frac{1}{4}$	238 30	} Knight's compass.
	28 36 $\frac{1}{10}$	S. 91 0 E.	10	1 35	49 11 $\frac{2}{3}$	239 53	
☿ — 12.	15 12 $\frac{1}{8}$	S. 69 48 $\frac{3}{4}$ W.	8	4 37 $\frac{1}{4}$	50 7	240 35	Gregory's ditto.
	13 5 $\frac{5}{8}$	S. 67 3 $\frac{1}{3}$ W.	6	4 54 $\frac{2}{3}$			Knight's ditto.
○ — 16.	12 13 $\frac{1}{10}$	S. 61 2 $\frac{1}{2}$ W.	6	9 23 $\frac{1}{2}$	56 57	240 47	Gregory's ditto.
	10 53 $\frac{1}{8}$	S. 59 30 W.	8	8 49			Knight's ditto.
☿ — 19.	18 38 $\frac{5}{8}$	S. 92 32 $\frac{1}{2}$ E.	6	10 26 $\frac{1}{2}$	62 28	244 0	Gregory's ditto.
☿ — 22.	23 16 $\frac{1}{5}$	S. 82 1 $\frac{1}{2}$ W.	10	9 48	62 4 $\frac{1}{2}$	248 1	
☿ — 24.	34 40 $\frac{1}{2}$	N. 40 31 $\frac{7}{8}$ E.	8	15 48 $\frac{5}{8}$	65 15 $\frac{5}{8}$	250 55	{ Ship's head, S. S. E. } Ditto, S. W. by W. } Capt. Ditto, S. S. E. } Cook.
	35 33 $\frac{1}{2}$	N. 28 5 $\frac{5}{8}$ E.	8	25 27 $\frac{3}{4}$	65 16		
	36 26 $\frac{1}{4}$	N. 31 0 E.	4	19 38	65 16		
☿ — 25.	14 12 $\frac{1}{4}$	S. 56 7 $\frac{1}{2}$ W.	6	19 26 $\frac{1}{2}$	65 45	250 45	Capt. Cook.
	21 33 $\frac{1}{8}$	N. 69 11 $\frac{5}{8}$ E.	8	18 22	66 19	250 40	Ditto.
☿ — 28.	9 44 $\frac{6}{7}$	S. 87 23 $\frac{4}{7}$ E.	7	23 11	69 30 $\frac{2}{3}$	251 57	Mr. Clerke.
	27 11 $\frac{5}{8}$	S. 44 37 $\frac{2}{9}$ E.	9	22 11 $\frac{1}{2}$	69 43	252 16	Capt. Cook.
☿ — 29.	19 42 $\frac{3}{8}$	S. 67 21 $\frac{7}{8}$ W.	8	24 46	70 20	253 3	Mr. Clerke.
	19 13 $\frac{1}{2}$	S. 66 12 W.	5	24 32			
☿ — 31.	22 10 $\frac{1}{5}$	N. 51 57 E.	5	28 32	68 13	255 15	Ditto.
☿ Feb. 3.	19 33 $\frac{5}{8}$	S. 70 38 $\frac{1}{2}$ W.	10	23 1 $\frac{1}{4}$	66 16 $\frac{1}{2}$	258 45	Gregory's compass.
	17 13 $\frac{1}{2}$	S. 64 45 $\frac{1}{2}$ W.	10	23 34			Knight's ditto.
	21 59 $\frac{1}{2}$	N. 57 10 $\frac{5}{8}$ E.	6	23 25 $\frac{2}{3}$	65 47 $\frac{1}{4}$	260 24	Mr. Clerke.
	24 22 $\frac{2}{5}$	N. 50 9 E.	5	24 47 $\frac{1}{3}$	65 47 $\frac{1}{2}$		Capt. Cook.
☿ — 4.	19 58 $\frac{3}{5}$	S. 67 31 W.	5	27 7 $\frac{2}{3}$	65 34	260 14	Ditto.
☿ — 5.	15 32 $\frac{1}{4}$	S. 66 51 $\frac{2}{3}$ W.	6	18 49 $\frac{1}{3}$	63 57 $\frac{2}{3}$	260 8	Mr. Pickersgill.
	14 41 $\frac{1}{3}$	S. 64 35 W.	5	19 22 $\frac{2}{3}$	63 57 $\frac{1}{2}$		
☿ — 10.	18 53 $\frac{2}{5}$	S. 75 45 W.	5	15 32	53 7	262 50	Mr. Clerk e.
	18 10	S. 75 13 W.	5	15 5			
☿ — 12.	5 2 $\frac{1}{2}$	S. 60 43 $\frac{1}{3}$ W.	6	13 55 $\frac{2}{3}$	50 11	264 35	
○ — 13.	16 34 $\frac{1}{3}$	S. 74 23 $\frac{1}{2}$ W.	10	14 40	50 30 $\frac{1}{4}$	263 36	
☿ — 14.	15 40 $\frac{1}{4}$	S. 75 46 $\frac{7}{8}$ W.	8	12 31 $\frac{1}{4}$	49 28	264 4	Mr. Pickersgill.
	14 6 $\frac{1}{7}$	S. 73 31 $\frac{3}{7}$ W.	7	12 58			
☿ — 18.	14 30 $\frac{2}{3}$	S. 74 28 $\frac{1}{3}$ W.	6	13 16::	43 40 $\frac{2}{3}$	265 45	Great motion.
☿ — 19.	14 14 $\frac{1}{10}$	S. 77 32 $\frac{3}{4}$ W.	9	10 5 $\frac{1}{2}$	41 41	265 3	Gregory's compass.
○ — 20.	14 33 $\frac{2}{3}$	S. 80 28 $\frac{1}{2}$ W.	10	7 21 $\frac{1}{2}$	39 32	266 0	Knight's ditto.

1774.	Altitude of the ☉ L. I.	Magnetic Azimuth of the ☉'s Center.	Z to ☉	Vari- ation East.	Latitude South.	Longitude East.	Observers, and Remarks.
☉ Feb. 20	13 23 $\frac{1}{3}$	N. 85 4 $\frac{1}{2}$ E.	11	8 3	38 22	266 18	Gregory's Compass.
☽ — 21	22 41 $\frac{2}{3}$	N. 78 33 $\frac{1}{3}$ E.	6	7 41	36 24	265 54	Ditto.
☽ — 23	15 15 $\frac{1}{2}$	S. 79 13 $\frac{1}{3}$ W.	6	9 51 $\frac{2}{3}$	36 49	263 9	Ditto.
	16 54 $\frac{2}{3}$	N. 80 32 E.	10	8 8	37 16	262 5	Knight's Compass.
☽ — 25	13 18	S. 81 57 $\frac{1}{2}$ W.	10	6 50	37 44	259 21	Ditto.
☉ — 27	11 24 $\frac{5}{8}$	S. 83 33 W.	10	4 9	34 31 $\frac{2}{3}$	257 57	Gregory's Compass.
☽ — 28	20 3 $\frac{4}{5}$	N. 83 8 $\frac{1}{3}$ E.	9	3 15	32 27 $\frac{1}{2}$	257 25	
☽ March 1.	12 12 $\frac{4}{5}$	S. 84 18 $\frac{1}{2}$ W.	10	4 23	32 6	257 30	Gregory's Compass.
	16 5 $\frac{1}{2}$	N. 83 21 $\frac{7}{8}$ E.	8	5 4	31 25	257 42	Knight's ditto.
☽ — 2	14 36 $\frac{1}{3}$	S. 85 19 W.	10	5 2 $\frac{1}{3}$	31 5	257 52	Ditto.
☽ — 3	9 23 $\frac{2}{3}$	S. 83 8 $\frac{3}{4}$ W.	8	4 26 $\frac{1}{2}$	30 25 $\frac{2}{3}$	258 45	Gregory's Compass.
	12 46	N. 84 56 $\frac{1}{2}$ E.	10	5 13	30 8	259 3	Knight's ditto.
☽ — 4	12 19 $\frac{2}{3}$	S. 83 58 $\frac{1}{3}$ W.	6	5 40	29 51 $\frac{1}{2}$	259 16	Ditto.
	12 26 $\frac{3}{4}$	N. 83 11 $\frac{2}{3}$ E.	9	6 53	29 46	259 27	Ditto.
☽ — 5	11 49 $\frac{7}{8}$	S. 84 19 $\frac{3}{8}$ W.	8	5 26 $\frac{1}{3}$	29 42	259 24	Gregory's Compass.
☉ — 6	9 44 $\frac{1}{2}$	S. 84 36 W.	10	4 11	29 11	258 48	Knight's ditto.
☽ — 7	12 15 $\frac{1}{10}$	N. 84 51 $\frac{1}{2}$ E.	10	4 31	28 2	256 26	
☽ — 16	10 40 $\frac{1}{3}$	S. 89 6 $\frac{1}{6}$ W.	13	4 30 $\frac{1}{3}$	27 7	250 7	Off Easter Island.
	15 30 $\frac{5}{8}$	N. 80 4 $\frac{1}{8}$ E.	8	3 32 $\frac{1}{3}$	26 56	249 50	
☽ — 17	8 25 $\frac{1}{5}$	N. 83 46 E.	10	3 15	26 16 $\frac{1}{2}$	248 50	
☽ — 18	4 40 $\frac{3}{4}$	S. 88 39 $\frac{2}{7}$ W.	7	2 47	25 54	248 35	
	11 50 $\frac{3}{8}$	N. 81 21 $\frac{7}{8}$ E.	8	3 41	25 36	248 20	
☽ — 19	9 57 $\frac{1}{3}$	S. 90 31 $\frac{2}{3}$ W.	6	3 29	24 32 $\frac{2}{3}$	248 7	
	14 36 $\frac{5}{8}$	N. 80 44 $\frac{3}{8}$ E.	8	3 5 $\frac{2}{3}$	23 26 $\frac{1}{2}$	247 40	
☽ — 24	14 55 $\frac{2}{3}$	N. 85 39 $\frac{1}{6}$ W.	6	1 52	16 54 $\frac{1}{2}$	243 10	
☽ — 25	9 52 $\frac{1}{2}$	N. 82 28 $\frac{1}{2}$ E.	10	2 31 $\frac{1}{2}$	15 6	241 0	
☽ — 26	9 33 $\frac{1}{4}$	N. 87 50 $\frac{1}{2}$ W.	9	2 38	14 26 $\frac{2}{3}$	240 18	
	17 37	N. 80 35 $\frac{1}{2}$ E.	10	2 23 $\frac{1}{4}$	13 31	239 20	
☉ — 27	9 30 $\frac{1}{4}$	N. 87 10 W.	5	2 10	12 55	238 45	
	10 52 $\frac{3}{5}$	N. 82 29 $\frac{3}{8}$ E.	8	2 13	12 3 $\frac{1}{3}$	237 45	
☽ — 28	9 30 $\frac{3}{8}$	N. 87 28 $\frac{1}{8}$ W.	8	2 31	11 30	237 10	
	11 36 $\frac{1}{3}$	N. 82 10 E.	10	2 17	10 39 $\frac{1}{3}$	236 20	
☽ — 29	10 35 $\frac{2}{3}$	N. 87 38 $\frac{1}{2}$ W.	10	3 3	10 10	235 40	
	16 54 $\frac{1}{2}$	N. 80 30 E.	6	2 43 $\frac{1}{4}$	9 34 $\frac{1}{2}$	233 20	
☽ — 30	9 28 $\frac{3}{5}$	N. 81 6 E.	10	3 14	9 18 $\frac{2}{3}$	232 8	
☽ — 31	9 8 $\frac{2}{3}$	N. 79 55 E.	10	4 3	9 27	230 14	
☽ April 1	9 58 $\frac{3}{4}$	N. 79 29 $\frac{1}{2}$ E.	10	3 56	9 28 $\frac{2}{3}$	228 26	
☽ — 2	9 31 $\frac{2}{3}$	N. 78 5 $\frac{1}{2}$ E.	10	3 58 $\frac{1}{2}$	9 32 $\frac{1}{2}$	226 44	
☉ — 3	12 22 $\frac{2}{3}$	N. 77 52 E.	10	4 15	9 32 $\frac{1}{2}$	224 58	
☽ — 4	14 29 $\frac{1}{2}$	N. 76 50 E.	7	4 27	9 33 $\frac{1}{4}$	223 20	Cloudy.
☽ — 5	9 33 $\frac{1}{8}$	N. 77 42 $\frac{1}{2}$ E.	10	4 13 $\frac{1}{2}$	9 21	222 2	
☽ — 6	8 55 $\frac{1}{8}$	N. 76 4 E.	10	5 33 $\frac{1}{4}$	9 36 $\frac{1}{2}$	221 10	
☽ — 9	12 14 $\frac{2}{3}$	N. 81 23 $\frac{1}{3}$ W.	6	1 28	9 55 $\frac{1}{2}$	220 51 $\frac{1}{3}$	At anchor in Resolution Bay, in the island Ohitahoo, one of the Marquesas. I can assign no reason for the small- ness of the preceding variation, if it was not occasioned by drawing the binacle a little towards the larboard side of the ship, to have the sun clear of some plantains which were hung up aft.

1774.	Altitude of the ☉ L. L.	Magnetic Azimuth of the ☉'s Center.	No. of Obs.	Vari- ation East.	Latitude South.	Longitude East.	Observers, and Remarks.
♂ April 12.	15 23 $\frac{4}{5}$	N. 82 26 $\frac{1}{4}$ W.	8	4 22 $\frac{1}{4}$	9 50	220 48	
	11 50 $\frac{2}{3}$	N. 72 59 $\frac{1}{2}$ E.	10	5 28 $\frac{1}{2}$	10 30	220 8	
♀ — 13.	6 46 $\frac{1}{4}$	N. 74 0 $\frac{3}{4}$ E.	8	5 1 $\frac{1}{2}$	11 52	219 10	
♂ — 14.	9 13	N. 84 3 $\frac{1}{2}$ W.	10	6 3 $\frac{1}{2}$	12 42	218 37	
	12 24 $\frac{1}{3}$	N. 70 56 $\frac{2}{3}$ E.	6	5 51 $\frac{1}{3}$	13 20	217 48	
♀ — 15.	13 50	N. 69 31 $\frac{1}{2}$ E.	10	6 9	14 17 $\frac{7}{8}$	216 36	
♂ — 16.	15 30 $\frac{2}{3}$	N. 68 44 $\frac{1}{2}$ E.	10	5 55	14 29	215 22	
☉ — 17.	10 3 $\frac{1}{6}$	N. 70 58 $\frac{1}{2}$ E.	10	5 5	14 34 $\frac{1}{2}$	214 45	
♂ — 18.	5 30 $\frac{1}{3}$	N. 69 22 $\frac{1}{2}$ E.	6	7 33 $\frac{1}{2}$	15 33	213 43	
♀ — 20.	8 41 $\frac{1}{2}$	N. 67 54 $\frac{1}{2}$ E.	10	6 51 $\frac{1}{2}$	17 12 $\frac{1}{2}$	211 18	
♂ May 21.	7 25 $\frac{1}{2}$	N. 71 58 $\frac{1}{3}$ W.	6	5 44 $\frac{1}{2}$	16 42 $\frac{4}{5}$	208 50 $\frac{2}{3}$	In Owharre harbour, Hua- heine. The two first were taken on board the ship, the two latter on shore. I used the same compass, but two different cards.
	6 0 $\frac{3}{8}$	N. 71 39 $\frac{1}{8}$ W.	6	4 53	16 42 $\frac{4}{5}$	208 50 $\frac{2}{3}$	
☉ — 22.	9 54 $\frac{5}{8}$	N. 70 29 $\frac{1}{8}$ W.	6	5 28 $\frac{1}{2}$	16 42 $\frac{4}{5}$	208 50 $\frac{2}{3}$	
	7 35 $\frac{1}{6}$	N. 71 14 $\frac{1}{6}$ W.	6	5 16 $\frac{2}{3}$	16 42 $\frac{4}{5}$	208 50 $\frac{2}{3}$	Taken on board the ship in Ohamaneno harbour, Uli- tea. I used the same com- pass-box in every one, but two different cards.
☉ — 29.	11 53 $\frac{3}{5}$	N. 68 55 $\frac{5}{8}$ W.	6	6 9 $\frac{1}{8}$	16 45 $\frac{3}{5}$	208 23 $\frac{1}{2}$	
	10 18 $\frac{1}{4}$	N. 69 11 $\frac{2}{3}$ W.	6	5 43 $\frac{1}{3}$	16 45 $\frac{3}{5}$	208 23 $\frac{1}{2}$	
♂ — 30.	5 53 $\frac{1}{4}$	N. 71 24 $\frac{1}{6}$ W.	6	6 17 $\frac{1}{3}$	16 45 $\frac{3}{5}$	208 23 $\frac{1}{2}$	
	4 59 $\frac{2}{3}$	N. 71 59 $\frac{1}{6}$ W.	6	6 31 $\frac{2}{3}$	16 45 $\frac{3}{5}$	208 23 $\frac{1}{2}$	
♂ — 31.	9 55 $\frac{1}{3}$	N. 69 21 $\frac{2}{3}$ W.	6	6 2 $\frac{2}{3}$	16 45 $\frac{3}{5}$	208 23 $\frac{1}{2}$	On shore in Ohamaneno har- bour. Cloudy, and uncertain.
♀ June 1	8 31 $\frac{2}{3}$	N. 69 34 $\frac{1}{6}$ W.	6	5 40 $\frac{1}{6}$	16 45 $\frac{3}{5}$	208 23 $\frac{1}{2}$	
	15 25 $\frac{1}{10}$	N. 67 6 $\frac{2}{3}$ W.	6	6 30 $\frac{2}{3}$	16 45 $\frac{3}{5}$	208 23 $\frac{1}{2}$	
	13 13 $\frac{1}{10}$	N. 67 58 $\frac{1}{3}$ W.	6	6 17 $\frac{5}{8}$	16 45 $\frac{3}{5}$	208 23 $\frac{1}{2}$	
☉ — 5.	17 46 $\frac{3}{8}$	N. 52 53 E.	10	6 0	16 49 $\frac{1}{2}$	206 30	
♀ — 8.	7 13 $\frac{1}{2}$	N. 71 6 $\frac{1}{8}$ W.	9	7 55 $\frac{1}{3}$	17 33	204 4	
	8 55	N. 54 5 $\frac{5}{8}$ E.	8	8 16	17 37 $\frac{1}{2}$	203 48	
♂ — 9.	9 12 $\frac{1}{4}$	N. 70 14 W.	10	8 3 $\frac{2}{3}$	17 40	203 22	
♀ — 10.	7 12 $\frac{1}{10}$	N. 71 38 $\frac{1}{2}$ W.	10	8 43	17 48 $\frac{1}{3}$	202 50	
	11 8	N. 52 15 E.	8	8 49	17 51	202 35	
♂ — 13.	6 43	N. 53 21 $\frac{1}{2}$ E.	10	9 15 $\frac{1}{2}$	18 40 $\frac{1}{2}$	197 37	
♂ — 14.	6 35 $\frac{2}{3}$	N. 71 10 W.	10	8 29 $\frac{1}{2}$	18 34 $\frac{2}{3}$	197 23	
	5 51 $\frac{1}{3}$	N. 54 40 E.	10	8 19	18 32	197 24	
♀ — 15.	7 57 $\frac{9}{10}$	N. 71 27 $\frac{2}{3}$ W.	5	9 24	18 25	197 10	
	7 43 $\frac{9}{10}$	N. 52 54 E.	10	9 16 $\frac{1}{2}$	18 21	196 54	
♂ — 16.	8 31 $\frac{1}{2}$	N. 51 51 $\frac{1}{2}$ E.	10	10 1	18 0 $\frac{1}{3}$	196 0	
♀ — 17.	7 44 $\frac{9}{10}$	N. 51 42 $\frac{1}{2}$ E.	10	10 23	18 16	194 31	
♂ — 18.	8 25 $\frac{9}{10}$	N. 51 17 $\frac{1}{2}$ E.	10	10 26 $\frac{1}{2}$	18 22 $\frac{1}{4}$	193 4	
☉ — 20.	12 28	N. 49 51 E.	10	9 38	18 54 $\frac{1}{2}$	190 40	
♂ — 21.	4 12	N. 74 56 $\frac{1}{2}$ W.	10	11 25	19 3 $\frac{1}{3}$	190 20	
	11 11 $\frac{4}{5}$	N. 49 9 $\frac{1}{2}$ E.	10	10 48 $\frac{1}{2}$	19 20	189 56	
♀ — 22.	14 0 $\frac{1}{4}$	N. 69 30 W.	5	11 8 $\frac{2}{3}$	19 27 $\frac{1}{2}$	189 36	
	8 22 $\frac{1}{8}$	N. 50 17 $\frac{1}{4}$ E.	9	10 59	19 43	188 39	Ship's head W. S. W. Ditto E. S. E. Ditto W. S. W.
♂ — 23.	8 19 $\frac{4}{5}$	N. 49 24 E.	10	11 40 $\frac{1}{2}$	20 24 $\frac{1}{4}$	186 52	
♀ — 24.	13 49 $\frac{1}{2}$	N. 48 43 $\frac{1}{4}$ E.	8	9 21 $\frac{1}{4}$	20 12	186 10	
♂ — 25.	11 31 $\frac{1}{8}$	N. 47 16 $\frac{1}{4}$ E.	8	12 6 $\frac{1}{2}$	20 26 $\frac{5}{8}$	185 42	

1774.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s Center.	No. of Obs.	Vari- ation East.	Latitude South.	Longitude East.	Observers, and Remarks.
☉ June 26.	5 57 $\frac{4}{5}$	N. 51 17 E.	10	11 5 $\frac{1}{2}$	20 15	185 29 $\frac{1}{2}$	Ship's head E. S. E.
☽ — 27.	6 8 $\frac{1}{6}$	N. 71 24 $\frac{1}{2}$ W.	6	9 7 $\frac{1}{4}$	20 15	185 29 $\frac{1}{2}$	Ditto N. E.
	Amplit.	N. 74 20 W.	1	9 18 $\frac{1}{2}$	20 15	185 29 $\frac{1}{2}$	Ditto N. E.
	Amplit.	N. 55 20 E.	1	9 41 $\frac{1}{4}$	20 15	185 29 $\frac{1}{2}$	Ditto E. N. E.
	11 17 $\frac{1}{2}$	N. 50 11 $\frac{1}{2}$ E.	10	9 29 $\frac{1}{4}$	20 15	185 29 $\frac{1}{2}$	Ditto E. N. E.
☽ — 28.	7 38 $\frac{5}{8}$	N. 71 35 E.	8	9 59 $\frac{1}{2}$	20 15	185 29 $\frac{1}{2}$	Ditto E. N. E.
☽ — 29.	7 45 $\frac{1}{2}$	N. 73 26 W.	10	11 49 $\frac{1}{4}$	20 10	185 25	Ship's head S. S. W.
	18 5 $\frac{5}{8}$	N. 44 39 $\frac{3}{8}$ E.	8	11 8 $\frac{1}{4}$	20 1 $\frac{1}{2}$	184 40	Ditto N. W.
☽ July 2.	10 23 $\frac{1}{3}$	N. 47 56 E.	10	12 47	19 45	182 13	
☉ — 3.	13 30 $\frac{7}{8}$	N. 71 6 $\frac{1}{2}$ W.	8	12 9	19 48 $\frac{1}{2}$	182 0	
	10 40 $\frac{5}{8}$	N. 48 41 $\frac{1}{2}$ E.	5	11 52 $\frac{1}{6}$	19 58	181 40	
☽ — 4.	3 51 $\frac{5}{6}$	N. 76 9 W.	10	12 17	20 10 $\frac{1}{4}$	181 20	
	Amplit.	N. 78 10 W.	1	12 40	20 11	181 18	
	5 56 $\frac{1}{2}$	N. 50 28 $\frac{1}{4}$ E.	8	12 29 $\frac{1}{4}$	20 34 $\frac{1}{4}$	180 44	
☽ — 5.	10 2 $\frac{2}{3}$	N. 48 0 E.	3	12 44	20 52	179 34	
☽ — 6.	16 31 $\frac{4}{5}$	N. 44 44 E.	10	12 17 $\frac{1}{2}$	20 53 $\frac{1}{4}$	178 41	Mr. Clerke.
☽ — 7.	12 3 $\frac{1}{5}$	N. 46 54 $\frac{1}{2}$ E.	10	12 59	20 47 $\frac{1}{2}$	177 50	Cloudy.
☽ — 8.	6 52 $\frac{1}{3}$	N. 49 47 $\frac{1}{2}$ E.	10	13 8	20 20	176 23	
☉ — 10.	6 5	N. 74 45 $\frac{2}{3}$ W.	7	11 1	19 30 $\frac{1}{4}$	175 08	Cloudy.
	9 48 $\frac{4}{5}$	N. 51 56 $\frac{2}{3}$ E.	8	10 21 $\frac{2}{3}$	18 49 $\frac{2}{3}$	175 14	Ditto.
☽ — 11.	10 3 $\frac{1}{10}$	N. 52 19 E.	10	10 28 $\frac{1}{4}$	17 38 $\frac{5}{6}$	174 29	
☽ — 12.	5 18 $\frac{5}{8}$	N. 54 46 $\frac{2}{3}$ E.	6	10 24 $\frac{1}{3}$	16 37	173 38	Gregory's Compass.
	8 26 $\frac{1}{3}$	N. 53 20 E.	6	10 38 $\frac{1}{4}$	16 37	173 38	Knight's ditto.
☽ — 13.	6 14 $\frac{2}{3}$	N. 75 30 $\frac{1}{2}$ W.	10	10 35	16 15 $\frac{1}{2}$	173 15	Gregory's ditto.
	7 31 $\frac{1}{4}$	N. 54 30 $\frac{1}{2}$ E.	10	10 13 $\frac{1}{2}$	15 49	172 42	Knight's ditto.
☽ — 14.	11 28 $\frac{1}{3}$	N. 52 30 E.	10	11 3 $\frac{1}{2}$	15 13 $\frac{1}{2}$	171 38	Ditto.
☽ — 22.	23 33 $\frac{5}{6}$	N. 49 20 $\frac{5}{6}$ E.	6	9 16 $\frac{1}{4}$	16 24	167 53	Capt. Cook. Ship's Comp.
☉ — 24.	15 5	N. 51 49 E.	10	11 24	17 6	168 36	
☽ — 25.	12 3 $\frac{1}{5}$	N. 74 13 W.	5	9 36 $\frac{1}{3}$	17 23	168 38	
	10 12	N. 56 50 $\frac{5}{6}$ E.	6	8 44 $\frac{2}{3}$	17 21 $\frac{1}{3}$	168 38	
☽ — 26.	14 15 $\frac{3}{8}$	N. 54 25 E.	10	9 18 $\frac{3}{4}$	17 52 $\frac{1}{2}$	169 10	
☽ — 27.	13 5 $\frac{1}{6}$	N. 73 20 W.	5	9 2 $\frac{3}{4}$	18 12 $\frac{1}{2}$	169 30	
	6 14 $\frac{2}{3}$	N. 55 19 $\frac{1}{6}$ E.	6	12 6	18 25	169 47	
☽ — 28.	10 16 $\frac{1}{2}$	N. 77 59 W.	10	12 12 $\frac{2}{3}$	18 24	169 46	Ship's head S. W.
	8 42 $\frac{3}{5}$	N. 56 30 E.	5	10 7 $\frac{1}{4}$	18 25 $\frac{1}{4}$	170 3	Knight's Comp. Ship's head S. E.
	12 9 $\frac{3}{5}$	N. 56 21 E.	5	8 43	18 26 $\frac{1}{4}$		Ship's ditto. Ship's h. ditto.
	13 14 $\frac{1}{10}$	N. 55 46 E.	5	8 47	18 26 $\frac{3}{4}$		Gregory's dit. Ship's h. ditto
☽ — 29.	10 28 $\frac{1}{3}$	N. 78 13 W.	10	12 19	18 34 $\frac{1}{2}$	170 3	Knight's dit. Ship's h. S. W.
☽ — 30.	10 21 $\frac{3}{8}$	N. 78 6 $\frac{7}{8}$ W.	8	12 26	18 30	169 42 $\frac{2}{3}$	Gregory's ditto. } Ship's h.
	8 22 $\frac{1}{3}$	N. 79 48 $\frac{1}{4}$ W.	6	12 37 $\frac{1}{2}$	18 29 $\frac{3}{4}$		Knight's ditto. } S. S. W.
	10 16	N. 55 9 $\frac{1}{6}$ E.	6	11 19 $\frac{3}{4}$	18 23 $\frac{1}{4}$	169 34	Gregory's ditto. } Ship's h.
	12 49	N. 55 50 $\frac{5}{6}$ E.	6	9 38 $\frac{1}{2}$	18 23 $\frac{3}{4}$		Knight's ditto. } Easterly.
☉ — 31.	9 45	N. 78 16 $\frac{2}{3}$ W.	6	11 2 $\frac{2}{3}$	18 24 $\frac{1}{4}$	169 32	Ditto. } Ship's
	8 34 $\frac{1}{8}$	N. 78 45 $\frac{5}{6}$ W.	6	11 26 $\frac{1}{4}$			Gregory's Comp. } head
	Amplit.	N. 81 45 W.	1	11 3 $\frac{3}{4}$			Ditto. } South.
	18 5 $\frac{1}{5}$	N. 50 44 $\frac{1}{6}$ E.	6	12 11 $\frac{1}{2}$	18 24 $\frac{1}{3}$	169 15	Ship's head S. W.

At anchor off Anna-
mocka, one of the
Friendly Isles.

1774.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s Center.	No of Obi.	Vari- ation East.	Latitude South.	Longitude East.	Observers, and Remarks.
Aug. 1.	13 0 $\frac{1}{10}$	N. 77 5 $\frac{5}{8}$ W.	6	11 38 $\frac{1}{2}$	18 47	169 10	
	15 59 $\frac{3}{4}$	N. 53 3 $\frac{1}{4}$ E.	6	11 6 $\frac{1}{2}$	18 44	169 2	
2.	8 14 $\frac{3}{4}$	N. 78 49 $\frac{3}{8}$ W.	8	10 53 $\frac{5}{8}$	18 42 $\frac{1}{2}$	169 2	
	Amplit.	N. 61 45 E.	1	10 10 $\frac{1}{2}$	18 36 $\frac{1}{2}$		
	9 18 $\frac{1}{10}$	N. 58 34 $\frac{1}{6}$ E.	6	8 8	18 36	169 15	Knight's Compaſs. } Ship's head
	10 22 $\frac{1}{10}$	N. 58 25 E.	6	8 49 $\frac{3}{4}$	18 36 $\frac{1}{2}$		Gregory's ditto. } E. S. E.
3.	5 11 $\frac{1}{2}$	N. 61 11 E.	10	8 27	18 43	169 20 $\frac{1}{2}$	
4.	7 13 $\frac{1}{10}$	N. 58 37 $\frac{1}{2}$ E.	6	10 18	19 26 $\frac{2}{3}$	169 44	Knight's Comp. } Ship's h.
	8 41 $\frac{1}{4}$	N. 58 37 $\frac{1}{2}$ E.	6	9 30 $\frac{1}{6}$	19 26 $\frac{2}{3}$	169 44	Ship's ditto. } S. S. W.
21.	5 48 $\frac{1}{6}$	N. 64 51 $\frac{1}{4}$ E.	4	10 25 $\frac{1}{2}$	18 39	168 55	Gregory's Compaſs.
	8 20 $\frac{3}{4}$	N. 63 56 $\frac{3}{4}$ E.	3	10 20 $\frac{5}{8}$			Knight's ditto.
22.	9 37 $\frac{3}{8}$	N. 64 28 $\frac{1}{8}$ E.	8	10 9 $\frac{1}{2}$	16 52	168 35	
23.	Amplit.	N. 88 20 W.	1		15 55	167 25	
25.	9 3	N. 64 54 $\frac{7}{8}$ E.	7	11 26 $\frac{1}{2}$	15 6 $\frac{1}{2}$	167 3	
26.	Ampl.	N. 69 15 E.	1		14 45	166 56	
	7 34 $\frac{1}{4}$	N. 66 20 $\frac{5}{8}$ E.	8	10 52	14 45	166 56	
27.	15 1	N. 62 58 $\frac{1}{2}$ E.	8	12 14 $\frac{1}{2}$	14 47 $\frac{1}{4}$	166 35	
28.	10 22 $\frac{1}{6}$	N. 86 9 $\frac{1}{6}$ W.	6	9 15	14 48 $\frac{3}{4}$	166 37	
	15 23 $\frac{3}{4}$	N. 64 5 $\frac{5}{8}$ E.	6	11 19 $\frac{1}{6}$	14 57 $\frac{1}{6}$	166 34	Ship's Compaſs.
30.	9 49 $\frac{3}{4}$	N. 86 26 $\frac{1}{4}$ W.	4	8 47 $\frac{1}{2}$	15 23 $\frac{1}{4}$	166 35	Ditto.
	6 6 $\frac{1}{4}$	N. 88 5 W.	3	9 12 $\frac{3}{4}$			Knight's Compaſs.
Sept. 1.	8 8 $\frac{1}{6}$	N. 70 5 $\frac{3}{4}$ E.	6	8 38 $\frac{1}{2}$	17 46	165 28	Cloudy.
2.	15 37 $\frac{3}{4}$	N. 85 51 $\frac{7}{8}$ W.	8	10 1 $\frac{5}{8}$	18 21	165 22	
3.	6 10 $\frac{1}{4}$	N. 89 6 $\frac{1}{2}$ W.	10	9 23	19 14 $\frac{1}{4}$	164 50	Gregory's Compaſs.
	8 33 $\frac{9}{10}$	N. 69 10 E.	6	9 44 $\frac{1}{4}$	19 50	164 44	Ditto.
	10 46 $\frac{1}{10}$	N. 67 35 $\frac{5}{8}$ E.	6	10 25 $\frac{1}{2}$			Knight's Compaſs.
7.	7 2 $\frac{1}{4}$	N. 73 3 E.	5	7 59 $\frac{1}{2}$			Mr. Clerke. Gregory's Comp. } Ship's head
	8 5 $\frac{1}{4}$	N. 72 22 E.	5	8 15			Gregory's Compaſs. } Eastward.
8.	6 0 $\frac{1}{6}$	N. 73 46 E.	5	7 42 $\frac{2}{3}$	20 18	164 40	Ditto.
	8 24 $\frac{1}{4}$	N. 72 22 E.	5	8 30 $\frac{1}{2}$			Knight's Compaſs.
9.	10 31 $\frac{3}{4}$	N. 71 3 E.	10	9 25			
11.	10 12 $\frac{3}{4}$	N. 72 3 E.	10	9 22 $\frac{1}{2}$			
14.	6 25 $\frac{1}{2}$	N. 73 27 $\frac{1}{2}$ E.	8	10 52 $\frac{5}{8}$	19 10	164 0	
15.	11 38 $\frac{3}{4}$	N. 88 26 $\frac{3}{4}$ W.	6	9 1 $\frac{1}{4}$	19 16 $\frac{3}{4}$	164 6	Gregory's Compaſs.
	9 41 $\frac{1}{10}$	N. 72 31 $\frac{3}{4}$ E.	6	11 6	19 33 $\frac{1}{4}$		Knight's ditto.
	10 56 $\frac{1}{5}$	N. 72 47 $\frac{1}{2}$ E.	6	10 11 $\frac{1}{6}$	19 33	164 17	Capt. Cook. Ship's Comp.
	12 14 $\frac{1}{10}$	N. 72 26 $\frac{2}{3}$ E.	6	10 2 $\frac{1}{4}$	19 33		Ditto. Gregory's ditto.
16.	15 53 $\frac{7}{8}$	N. 89 25 W.	8	9 22 $\frac{1}{2}$	19 34	164 23	Ship's Compaſs.
17.	16 26 $\frac{1}{2}$	N. 72 17 $\frac{1}{2}$ E.	2		20 2	164 58	Knight's ditto.
19.	11 49 $\frac{3}{8}$	N. 73 15 E.	6	10 52			Ship's ditto
	13 14 $\frac{4}{5}$	N. 73 29 $\frac{1}{6}$ E.	6	10 3 $\frac{5}{8}$	20 25	165 50	Gregory's ditto.
	14 51 $\frac{1}{2}$	N. 72 51 $\frac{1}{3}$ E.	6	10 2			Ship's ditto.
20.	14 10 $\frac{1}{4}$	S. 86 46 $\frac{3}{4}$ W.	6	10 0 $\frac{1}{4}$	20 52	165 50	Knight's ditto.
	12 44 $\frac{2}{3}$	S. 85 30 $\frac{5}{8}$ W.	6	10 40 $\frac{3}{4}$			Gregory's ditto.
	11 26 $\frac{2}{3}$	S. 85 46 $\frac{3}{4}$ W.	6	9 53			
	9 55 $\frac{9}{10}$	N. 75 7 $\frac{9}{10}$ E.	6	10 12	20 52	166 8	

1774.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s center.	Z. No.	Vari- ation East.	Latitude South.	Longitude East.	Observers, and Remarks.
Sept. 21.	5 47 Amplit.	S. 83 4 $\frac{1}{2}$ W.	6	9 58	20 57 $\frac{1}{2}$	166 10	
		N. 81 30 E.	1		21 12 $\frac{1}{2}$	166 42	Gregory's Compass.
22.	9 33 $\frac{3}{8}$	N. 77 49 $\frac{1}{8}$ E.	6	7 52 $\frac{5}{8}$	21 12 $\frac{5}{8}$		Ship's ditto.
	10 47 $\frac{5}{8}$	S. 85 31 W.	5	9 12	21 37 $\frac{1}{8}$	166 50	Gregory's ditto.
	9 51 $\frac{1}{4}$	S. 85 47 W.	5	8 22 $\frac{1}{3}$	21 49 $\frac{1}{3}$	167 2	
	11 2	N. 76 23 $\frac{1}{3}$ E.	6	9 0	21 57	167 28	
23.	11 39 $\frac{7}{8}$	N. 73 58 $\frac{1}{3}$ E.	6	11 32 $\frac{1}{2}$			Ship's Compass.
25.	11 9 $\frac{9}{10}$	N. 77 21 $\frac{2}{3}$ E.	6	9 11 $\frac{1}{3}$	22 9 $\frac{1}{3}$	167 28	Knight's ditto.
	12 41 $\frac{2}{3}$	N. 77 8 $\frac{1}{3}$ E.	6	8 45 $\frac{2}{3}$			Ship's ditto.
29.	7 56 $\frac{1}{10}$	N. 80 55 E.	6	8 34	22 28 $\frac{1}{2}$	167 17	Knight's ditto.
	9 15 $\frac{1}{2}$	N. 80 21 E.	5	8 39			Ship's ditto.
30.	10 24 $\frac{1}{3}$	S. 81 7 $\frac{1}{3}$ W.	7	10 12 $\frac{1}{2}$	22 41	167 25	Gregory's ditto. } By Capt.
	9 14 $\frac{1}{6}$	S. 80 38 $\frac{1}{3}$ W.	6	10 11 $\frac{2}{3}$			Knight's ditto. } Cook.
	7 53 $\frac{2}{3}$	S. 78 57 $\frac{1}{2}$ W.	6	11 19 $\frac{1}{6}$			Ditto.
Oct. 2.	11 1 $\frac{1}{4}$	S. 81 0 $\frac{5}{8}$ W.	6	9 52 $\frac{1}{2}$	23 19 $\frac{2}{3}$	169 40	Gregory's Compass.
	8 47 $\frac{1}{10}$	S. 80 51 $\frac{2}{3}$ W.	3	9 2			Ditto.
3.	10 30 $\frac{2}{3}$	N. 80 36 $\frac{2}{3}$ E.	6	9 19 $\frac{1}{3}$	25 13	171 8	Knight's Compass.
	12 52 $\frac{1}{2}$	N. 78 49 $\frac{1}{6}$ E.	6	9 43 $\frac{1}{6}$			Gregory's ditto.
4.	8 29 $\frac{5}{8}$	S. 78 48 $\frac{1}{3}$ W.	6	10 29	25 46 $\frac{2}{3}$	171 21 $\frac{1}{2}$	Knight's ditto.
	12 55 $\frac{1}{3}$	N. 77 15 E.	6	11 22 $\frac{1}{2}$	26 33 $\frac{2}{3}$	171 35	Ditto.
5.	11 55 $\frac{5}{8}$	N. 75 7 $\frac{1}{2}$ E.	6	14 10			Gregory's Compass.
	13 18 $\frac{1}{2}$	N. 75 35 $\frac{1}{6}$ E.	6	12 58	27 54	171 47	Knight's ditto.
	14 46	N. 74 5 E.	6	13 40 $\frac{1}{2}$			Ditto.
6.	10 44 $\frac{2}{3}$	S. 80 6 W.	5	9 50	27 52	171 45	Gregory's Comp. } Ship's h.
	8 46 $\frac{1}{4}$	S. 78 21 W.	5	10 26 $\frac{1}{3}$			S. E.
	15 0 $\frac{1}{2}$	N. 76 48 $\frac{1}{8}$ E.	8	11 17 $\frac{5}{8}$	27 52 $\frac{1}{3}$	171 45	Ditto. Ship's head N. W.
7.	9 13 $\frac{1}{4}$	N. 77 40 $\frac{5}{8}$ E.	6	13 53			Knight's Compass.
	10 17 $\frac{9}{10}$	N. 77 3 $\frac{1}{3}$ E.	6	13 54	28 16 $\frac{1}{2}$	170 45	Ditto.
	12 35 $\frac{3}{3}$	N. 76 55 $\frac{5}{8}$ E.	6	12 47 $\frac{1}{2}$			Gregory's Compass.
8.	4 58 $\frac{1}{3}$	S. 73 47 W.	5	12 11			Ditto.
	4 15 $\frac{9}{10}$	S. 72 18 W.	5	13 16 $\frac{1}{2}$	28 37 $\frac{2}{3}$	170 19	Ship's Compass.
	3 16 $\frac{1}{3}$	S. 71 6 $\frac{2}{3}$ W.	6	13 54			Knight's ditto.
10.	13 18	N. 79 0 $\frac{5}{8}$ E.	6	11 28 $\frac{1}{6}$			Ship's ditto.
	14 59 $\frac{2}{3}$	N. 78 6 $\frac{2}{3}$ E.	6	11 25 $\frac{2}{3}$	29 5 $\frac{1}{3}$	168 10	Knight's ditto.
	16 34	N. 78 25 E.	6	10 15 $\frac{1}{3}$			Gregory's ditto.
11.	13 39 $\frac{1}{3}$	S. 78 20 W.	6	11 19			Ship's ditto.
	12 3 $\frac{1}{2}$	S. 77 53 $\frac{1}{3}$ W.	6	10 51 $\frac{1}{3}$	29 37	168 2	Knight's ditto.
	10 34 $\frac{5}{6}$	S. 78 7 $\frac{1}{2}$ W.	6	9 47 $\frac{1}{2}$			Gregory's ditto.
	14 24 $\frac{1}{2}$	N. 79 1 $\frac{1}{4}$ E.	8	10 54 $\frac{1}{4}$	30 35 $\frac{1}{2}$	167 51	Knight's ditto.
12.	21 41	N. 76 9 $\frac{1}{6}$ E.	6	8 53	32 39	168 10	Gregory's ditto.
13.	12 20 $\frac{1}{3}$	S. 80 15 W.	7	8 29	33 10 $\frac{1}{2}$	168 36	Ditto.
	17 37 $\frac{1}{4}$	N. 79 3 $\frac{1}{3}$ E.	6	8 47 $\frac{2}{3}$	33 43	169 9	Ditto.
14.	11 24 $\frac{3}{5}$	S. 77 25 $\frac{3}{8}$ W.	6	10 29 $\frac{1}{8}$	34 25 $\frac{2}{3}$	169 45	Knight's Compass.
	15 41 $\frac{1}{4}$	N. 78 53 $\frac{1}{8}$ E.	8	10 18 $\frac{5}{8}$	35 8 $\frac{1}{3}$	170 34	Ditto.
Nov. 11.	20 40 $\frac{1}{8}$	N. 81 26 E.	5	13 15 $\frac{2}{3}$	42 54 $\frac{1}{6}$	175 30	
12.	9 23 $\frac{1}{10}$	S. 62 14 $\frac{3}{8}$ W.	6	12 37 $\frac{1}{2}$	43 34	175 58	

ON BOARD THE RESOLUTION.

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1774.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s center.	No. of Obs.	Vari- ation East.	Latitude South.	Longitude East.	Observers, and Remarks.
h Nov. 12.	20 24 $\frac{7}{8}$	N. 81 55 E.	6	13 26 $\frac{1}{2}$	44 7	176 53	
D — 14.	23 46 $\frac{1}{2}$	N. 78 39 E.	5	12 51	47 33	180 50	
☉ — 15.	12 53 $\frac{7}{8}$	S. 63 56 W.	5	12 42	48 6 $\frac{1}{2}$	181 20	
☉ — 16.	13 19 $\frac{7}{8}$	S. 64 13 $\frac{1}{2}$ W.	4	12 28	49 59	183 38	Very cloudy.
h — 17.	21 32 $\frac{1}{2}$	N. 82 38 $\frac{1}{2}$ E.	8	10 54 $\frac{1}{2}$	52 31 $\frac{1}{2}$	188 31	Mr. Gilbert.
☉ — 22.	22 56 $\frac{1}{2}$	N. 82 55 E.	5	9 35	55 42 $\frac{2}{3}$	204 34	Gregory's compass: cloudy.
☉ — 23.	20 24 $\frac{1}{3}$	S. 74 52 $\frac{1}{2}$ W.	12	8 49 $\frac{1}{2}$	55 42 $\frac{1}{2}$	204 40	
☉ — 25.	10 4 $\frac{3}{5}$	S. 61 5 $\frac{3}{5}$ W.	6	7 1 $\frac{1}{2}$	55 7	213 0	
h Dec. 1.	24 27 $\frac{2}{3}$	S. 87 55 $\frac{2}{3}$ E.	6	1 20	55 12	237 0	Gregory's compass: cloudy,
h — 3.	22 18 $\frac{1}{2}$	S. 85 54 $\frac{1}{2}$ E.	12	3 18	53 21	240 50	and a great sea.
☉ — 4.	23 23 $\frac{1}{3}$	S. 80 13 $\frac{1}{3}$ W.	6	3 35 $\frac{2}{3}$	53 15 $\frac{1}{2}$	242 17	Gregory's compass.
	22 6 $\frac{1}{3}$	S. 78 59 $\frac{1}{2}$ W.	6	3 13 $\frac{1}{3}$			Knight's ditto.
D — 5.	18 27 $\frac{1}{3}$	S. 74 15 $\frac{1}{2}$ W.	10	3 5 $\frac{2}{3}$	53 6	246 10	Mr. Gilbert: Greg. compass.
	16 43	S. 70 32 $\frac{1}{2}$ W.	6	4 26 $\frac{1}{2}$			Knight's compass.
☉ — 6.	8 24 $\frac{2}{3}$	S. 58 30 W.	8	4 58	53 13	250 5	Gregory's ditto.
	15 55 $\frac{1}{2}$	S. 78 45 $\frac{1}{2}$ E.	7	5 7 $\frac{1}{2}$	53 17 $\frac{1}{2}$	252 0	Ditto.
☉ — 11.	24 5 $\frac{1}{10}$	S. 73 38 $\frac{1}{2}$ W.	8	9 54 $\frac{1}{2}$	53 29	264 40	Ditto.
	20 40 $\frac{1}{2}$	S. 67 35 W.	4	11 31			Knight's compass.
D — 12.	15 0 $\frac{1}{2}$	S. 60 14 $\frac{1}{2}$ W.	6	11 17 $\frac{3}{5}$	53 21 $\frac{1}{2}$	268 24	Gregory's ditto.
	14 6 $\frac{1}{2}$	S. 58 30 $\frac{3}{8}$ W.	6	11 48 $\frac{1}{2}$			Knight's ditto.
	16 33 $\frac{1}{8}$	S. 86 1 $\frac{1}{2}$ E.	8	12 31	53 23 $\frac{3}{4}$	269 30	Gregory's ditto.
☉ — 13.	9 12 $\frac{1}{2}$	S. 49 30 $\frac{3}{8}$ W.	6	13 49 $\frac{1}{2}$	53 23 $\frac{3}{8}$	270 30	Knight's ditto.
	8 37 $\frac{1}{2}$	S. 49 35 $\frac{3}{8}$ W.	6	12 56 $\frac{3}{8}$			Mr. Pickersgill: G.'s ditto.
	14 29 $\frac{3}{8}$	S. 84 56 $\frac{3}{8}$ E.	6	14 4 $\frac{1}{2}$	53 24 $\frac{3}{8}$	272 28	Ditto.
	16 42 $\frac{1}{3}$	S. 87 20 $\frac{3}{8}$ E.	6	13 32 $\frac{1}{3}$			Gregory's compass.
☉ — 14.	13 35 $\frac{1}{4}$	S. 53 11 $\frac{3}{4}$ W.	6	16 11 $\frac{1}{2}$	53 26 $\frac{1}{4}$	273 48	Knight's ditto.
	12 8 $\frac{2}{3}$	S. 52 47 $\frac{1}{2}$ W.	6	14 35 $\frac{1}{2}$	53 30 $\frac{1}{4}$	277 30	Gregory's ditto.
h — 15.	16 16 $\frac{1}{2}$	S. 55 14 $\frac{1}{2}$ W.	6	17 37 $\frac{3}{8}$			Knight's ditto.
☉ — 16.	12 29 $\frac{1}{3}$	S. 49 17 $\frac{1}{2}$ W.	6	18 24 $\frac{1}{2}$	53 25 $\frac{1}{4}$	280 58	Mr. Gilbert: Greg. ditto.
	11 4 $\frac{7}{8}$	S. 47 34 $\frac{1}{2}$ W.	6	18 15 $\frac{1}{2}$			Knight's ditto.
	13 1 $\frac{2}{3}$	S. 86 38 E.	5	18 15 $\frac{1}{2}$			Mr. Pickersgill: with Gre-
	19 36 $\frac{2}{3}$	S. 94 52 $\frac{1}{2}$ E.	6	17 44 $\frac{1}{2}$	53 25	282 46	gory's compass.
	23 59 $\frac{3}{8}$	S. 102 30 $\frac{3}{8}$ E.	6	19 40 $\frac{1}{2}$			Mr. Gilbert: Greg. ditto.
h — 17.	16 22 $\frac{3}{8}$	S. 52 20 W.	6	20 31	53 15 $\frac{1}{4}$	284 12	Knight's ditto.
	14 58 $\frac{1}{2}$	S. 49 46 $\frac{2}{3}$ W.	6	21 13 $\frac{1}{3}$			Ship's ditto.
☉ — 18.	16 43 $\frac{1}{2}$	S. 52 57 $\frac{1}{2}$ W.	6	20 10 $\frac{1}{2}$	54 43 $\frac{3}{8}$	286 59	Knight's ditto.
	15 50 $\frac{1}{2}$	S. 50 49 $\frac{1}{2}$ W.	6	21 5 $\frac{1}{2}$			Gregory's ditto.
	14 58 $\frac{1}{8}$	S. 50 15 W.	6	20 11 $\frac{2}{3}$			Ship's ditto.
D — 19.	17 31 $\frac{3}{8}$	S. 51 45 W.	6	22 22	55 31 $\frac{2}{3}$	289 20	Knight's ditto.
	16 38 $\frac{1}{3}$	S. 50 35 $\frac{5}{8}$ W.	6	22 16 $\frac{1}{2}$			Ship's ditto.
h — 29.	18 45 $\frac{5}{8}$	S. 52 44 $\frac{1}{2}$ W.	6	23 28 $\frac{1}{3}$	55 20	293 55	Knight's ditto.
	17 23 $\frac{1}{4}$	S. 49 56 $\frac{1}{4}$ W.	4	24 15 $\frac{1}{4}$			Ship's ditto.
h — 31.	12 9	S. 41 45 $\frac{3}{8}$ W.	6	25 22 $\frac{2}{3}$			Knight's ditto.
	11 8	S. 39 53 $\frac{1}{3}$ W.	6	25 46	54 41	295 46	Ship's ditto.
	25 44 $\frac{2}{3}$	N. 68 30 $\frac{1}{2}$ E.	6	25 24 $\frac{1}{3}$			Knight's ditto.
	26 43 $\frac{2}{3}$	N. 67 11 $\frac{2}{3}$ E.	6	25 21			

1775.		Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s center.	N. of Obs.	Vari- ation East.	Latitude South.	Longitude East.	Observers, and Remarks.
☉ Jan.	1.	11 20 $\frac{1}{2}$	S. 41 21	W.	10 24 45 $\frac{1}{2}$	54 41	295 46	Knight's Compaſs.
☽ —	2.	12 34 $\frac{1}{2}$	S. 44 49 $\frac{1}{2}$	W.	6 23 14 $\frac{1}{2}$	54 41	295 46	Ditto. Mr. Gilbert.
☿ —	3.	18 26 $\frac{7}{8}$	N. 83 35	E.	8 19 54	55 11 $\frac{1}{2}$	297 7	Ship's Compaſs. } The Ship
		20 24 $\frac{3}{8}$	N. 80 56 $\frac{7}{8}$	E.	8 19 47 $\frac{1}{2}$	55 11 $\frac{1}{2}$	297 7	Knight's ditto. } rolled 28°.
☿ —	4.	17 0 $\frac{3}{4}$	N. 85 13 $\frac{1}{2}$	E.	10 20 11 $\frac{5}{8}$	56 42 $\frac{1}{2}$	300 30	The Ship rolled 25°.
☿ —	6.	19 16	N. 77 10	E.	4 24 36	57 22 $\frac{1}{2}$	306 19	Mr. Pickersgill. Greg. Comp.
		23 12 $\frac{1}{2}$	N. 71 13	E.	5 24 25 $\frac{1}{2}$	57 22 $\frac{1}{2}$	306 19	Knight's Comp. Great motion.
☿ —	7.	16 12 $\frac{1}{2}$	S. 50 1 $\frac{3}{4}$	W.	6 23 53 $\frac{1}{2}$	56 27 $\frac{3}{4}$	306 30	Ditto.
☉ —	8.	12 57 $\frac{1}{2}$	S. 50 3 $\frac{1}{8}$	W.	8 19 55 $\frac{1}{2}$	55 3	308 10	Ditto.
☿ —	10.	22 54	N. 78 10	E.	6 17 42	54 38 $\frac{1}{2}$	314 20	
☿ —	14.	29 56 $\frac{1}{2}$	S. 78 49 $\frac{1}{2}$	W.	12 15 44 $\frac{1}{2}$	53 57 $\frac{3}{8}$	320 35	
☽ —	16.	5 21 $\frac{1}{2}$	S. 73 22 $\frac{1}{2}$	E.	4 12 29 $\frac{5}{8}$	53 56	322 37	Mr. Gilbert. Ship's Compaſs.
☿ —	17.	18 37 $\frac{1}{4}$	S. 68 50	W.	6 11 13 $\frac{3}{4}$	54 9	323 10	Ship's Compaſs.
		19 6	N. 89 0	E.	2 10 1			Mr. Clerke. Ship's Compaſs.
		20 31 $\frac{1}{10}$	N. 85 46 $\frac{2}{3}$	E.	6 11 18 $\frac{1}{2}$	54 20 $\frac{2}{3}$	323 54	Knight's Compaſs.
		21 31 $\frac{1}{4}$	N. 83 50	E.	5 11 52 $\frac{1}{2}$			Ship's ditto.
☿ —	19.	15 6	S. 64 28 $\frac{1}{2}$	W.	6 11 31 $\frac{2}{3}$	54 47 $\frac{1}{2}$	324 20	Ditto.
		14 0	S. 62 45	W.	2 11 42 $\frac{2}{3}$	54 47 $\frac{1}{2}$	324 20	Knight's Compaſs.
		12 49 $\frac{1}{2}$	S. 59 48 $\frac{1}{2}$	W.	3 12 59 $\frac{1}{2}$			Ditto.
		12 58	S. 88 28 $\frac{1}{2}$	E.	6 15 13 $\frac{1}{4}$	54 59 $\frac{1}{2}$	323 40	Ship's Compaſs.
		14 9 $\frac{4}{5}$	N. 88 39 $\frac{1}{2}$	E.	6 16 30 $\frac{1}{2}$	54 59 $\frac{1}{2}$	323 40	Knight's ditto.
☉ —	22.	19 48 $\frac{1}{2}$	S. 69 26 $\frac{7}{8}$	W.	8 14 15 $\frac{1}{2}$	54 54 $\frac{2}{3}$	325 37	{ Mr. Gilbert. Greg. Comp.
☽ —	23.	11 42 $\frac{1}{4}$	S. 83 43 $\frac{1}{2}$	E.	3 10 42	54 57 $\frac{2}{3}$	325 25	{ A bad horizon.
☿ —	25.	18 20 $\frac{1}{2}$	S. 74 28	W.	5 9 6	54 57 $\frac{2}{3}$	325 25	Bad horizon.
		17 19 $\frac{2}{3}$	S. 74 11 $\frac{2}{3}$	W.	6 7 24 $\frac{1}{2}$	56 14 $\frac{1}{2}$	327 30	Knight's Compaſs.
		16 10 $\frac{1}{2}$	S. 71 16	W.	5 8 38	56 14 $\frac{1}{2}$	327 30	Gregory's ditto.
		14 21 $\frac{2}{3}$	S. 89 50	E.	5 12 33 $\frac{1}{2}$	57 4 $\frac{1}{2}$	328 58	Knight's ditto.
☿ —	26.	17 9 $\frac{1}{2}$	S. 94 30	E.	6 11 37 $\frac{1}{2}$	57 4 $\frac{1}{2}$	328 58	Ditto.
		18 33 $\frac{7}{8}$	N. 84 36 $\frac{2}{3}$	E.	6 10 43 $\frac{2}{3}$	59 14	329 0	Gregory's Compaſs.
☿ —	31.	14 2 $\frac{9}{10}$	S. 89 37	E.	8 10 47 $\frac{1}{2}$	59 14	329 0	Knight's ditto.
		15 30 $\frac{1}{2}$	S. 92 45 $\frac{5}{8}$	E.	8 10 37 $\frac{2}{3}$	58 37 $\frac{1}{2}$	332 45	Ship's ditto. } Capt. Cook.
☿ Feb.	2.	13 56 $\frac{1}{2}$	S. 70 50	W.	3 9 49 $\frac{2}{3}$	58 37 $\frac{1}{2}$	332 45	Knight's ditto. }
		13 33 $\frac{5}{8}$	S. 70 35	W.	5 9 15 $\frac{2}{3}$	57 48 $\frac{1}{2}$	333 8	Mr. Gilbert. Ship's Comp.
☿ —	5.	15 58	S. 80 37 $\frac{1}{2}$	W.	2 4 33 $\frac{1}{2}$	57 48 $\frac{1}{2}$	333 8	The ſame Compaſs.
		14 56	S. 79 15	W.	1 4 20 $\frac{1}{2}$	57 16 $\frac{1}{2}$	336 38	Mr. Gilbert. }
		14 9 $\frac{1}{2}$	S. 76 12 $\frac{1}{2}$	W.	6 6 11	57 16 $\frac{1}{2}$	336 38	Mr. Clerke. } Ship's Compaſs.
☿ —	7.	14 30 $\frac{1}{2}$	S. 82 17 $\frac{1}{2}$	W.	8 1 52 $\frac{1}{2}$	58 28	342 50	Knight's Compaſs.
		18 39	N. 86 3	E.	5 2 42 $\frac{1}{2}$	58 28	342 50	Gregory's Compaſs. }
		19 25 $\frac{1}{2}$	N. 86 42 $\frac{1}{2}$	E.	6 0 46 $\frac{1}{2}$	58 29 $\frac{1}{2}$	344 40	Ship's ditto. } Mr. Gil
		20 13 $\frac{2}{3}$	N. 83 48	E.	5 2 21	58 29 $\frac{1}{2}$	344 40	Knight's ditto. } bert.
		21 32 $\frac{1}{8}$	N. 80 49	E.	5 3 5 $\frac{1}{2}$			Knight's Compaſs.
☿ —	8.	9 36 $\frac{1}{2}$	S. 77 30	E.	6 0 23 $\frac{1}{2}$	58 28	346 44	Gregory's dit. Mr. Pickersgill.
		12 44 $\frac{5}{8}$	S. 83 5	E.	3 0 50 $\frac{2}{3}$	58 28	346 44	Knight's Compaſs.
☿ —	9.	14 16 $\frac{2}{3}$	S. 85 5 $\frac{5}{8}$	W.	8 0 7 $\frac{3}{8}$	58 26 $\frac{1}{2}$	346 53	Ditto.

1775.	Altitude of the ☉ L. L.	Magnetic Azimuth of the ☉'s Center.	No. of Obs.	Variation West.	Latitude South.	Longitude East.	Observers, and Remarks.
24 Feb. 9.	10 57 $\frac{1}{6}$	S. 79 41 $\frac{2}{3}$ E.	6	0 16	58 17	348 16	Knight's Compass.
	12 28 $\frac{2}{3}$	S. 81 43 $\frac{1}{3}$ E.	6	0 42 $\frac{1}{2}$	58 15 $\frac{1}{6}$	350 6	Ship's ditto.
♀ — 10.	18 39 $\frac{1}{10}$	S. 94 19 $\frac{1}{2}$ W.	10	1 40 $\frac{1}{2}$	58 23	352 56	Knight's ditto.
h — 11.	15 58 $\frac{1}{6}$	S. 85 36 $\frac{1}{4}$ E.	8	3 41 $\frac{3}{4}$	58 20	353 15	Ship's ditto. } Mr. Gilbert.
	17 10 $\frac{9}{10}$	S. 87 0 $\frac{5}{8}$ E.	6	4 16 $\frac{1}{6}$	58 2	354 29	Knight's ditto. }
○ — 12.	21 42 $\frac{1}{2}$	N. 78 22 $\frac{1}{2}$ W.	2	3 2::			Ditto.
	17 3 $\frac{5}{8}$	S. 87 14 $\frac{1}{6}$ E.	6	4 21 $\frac{5}{8}$			Ditto.
	18 15 $\frac{9}{10}$	S. 88 59 E.	5	4 35 $\frac{2}{3}$			Mr. Gilbert. Ship's Comp.
Dropped 360° of Longitude, and repeated ♂ February the 14th.							
♂ — 14.	13 53	N. 80 51 $\frac{2}{3}$ W.	12	6 50 $\frac{1}{3}$	56 14 $\frac{1}{2}$	4 50	A great sea.
24 — 16.	16 30 $\frac{4}{5}$	N. 75 31 $\frac{2}{3}$ W.	6	12 7	54 24 $\frac{1}{6}$	6 30	
	23 51	S. 89 37 $\frac{1}{8}$ E.	8	13 42 $\frac{1}{3}$	54 21 $\frac{1}{2}$	8 6	
♀ — 17.	14 50 $\frac{2}{3}$	N. 76 29 W.	10	13 16 $\frac{1}{2}$	54 25 $\frac{1}{3}$	9 20	
♂ — 21.	16 3 $\frac{7}{8}$	N. 66 15 $\frac{1}{2}$ W.	10	19 8 $\frac{1}{2}$	54 26	19 15	
h — 25.	24 56 $\frac{1}{6}$	S. 82 49 $\frac{1}{2}$ E.	10	24 7 $\frac{1}{6}$	49 37 $\frac{1}{4}$	29 32	
♂ — 28.	12 18 $\frac{9}{10}$	N. 65 3 $\frac{1}{3}$ W.	6	23 12	46 48	33 36	Gregory's Compass.
	9 34 $\frac{2}{3}$	N. 67 22 $\frac{1}{2}$ W.	6	23 50 $\frac{1}{6}$			Knight's ditto.
♂ March 1.	20 53 $\frac{5}{8}$	S. 77 30 E.	2	24 12	45 53 $\frac{1}{2}$	31 0	Mr. Gilbert. Ship's Comp.
	22 23 $\frac{1}{8}$	S. 78 50 E.	3	24 34			Knight's Compass.
24 — 2.	4 13 $\frac{3}{4}$	N. 73 23 $\frac{3}{4}$ W.	8	22 23 $\frac{1}{4}$	45 3 $\frac{2}{3}$	30 45	
	13 19 $\frac{1}{4}$	S. 70 32 $\frac{1}{2}$ E.	2	22 56 $\frac{1}{2}$	44 10	30 3	
♀ — 3.	18 21 $\frac{1}{10}$	N. 57 32 $\frac{1}{2}$ W.	8	23 57 $\frac{5}{8}$	43 33	29 40	
	16 37 $\frac{1}{2}$	S. 74 28 E.	10	22 41 $\frac{2}{3}$	43 43 $\frac{1}{3}$	29 15	Very hazy.
h — 6.	10 40 $\frac{1}{4}$	S. 70 28 E.	8	21 57 $\frac{1}{2}$	41 33	26 36	
♂ — 8.	7 8 $\frac{5}{8}$	S. 68 51 E.	6	21 30 $\frac{5}{8}$	42 0 $\frac{1}{4}$	25 25	
♀ — 10.	7 51 $\frac{7}{8}$	N. 67 33 $\frac{3}{4}$ W.	8	20 50 $\frac{1}{2}$	40 47 $\frac{1}{3}$	23 50	
○ — 12.	7 18 $\frac{1}{2}$	N. 66 7 $\frac{1}{2}$ W.	8	22 9 $\frac{1}{2}$	38 40 $\frac{5}{8}$	24 10	
h — 13.	6 21 $\frac{1}{3}$	N. 66 36 $\frac{1}{4}$ W.	8	22 2	37 0	22 24	
♂ — 14.	9 41 $\frac{2}{3}$	S. 71 36 $\frac{1}{4}$ E.	8	22 46	35 20 $\frac{1}{3}$	22 17	
24 — 16.	7 14 $\frac{5}{8}$	S. 73 21 $\frac{7}{8}$ E.	8	20 1 $\frac{1}{6}$	34 55 $\frac{2}{3}$	21 10	
♀ — 17.	12 19 $\frac{1}{6}$	N. 61 7 $\frac{1}{2}$ W.	6	21 30 $\frac{1}{2}$	35 6 $\frac{1}{2}$	20 50	
	7 37 $\frac{3}{4}$	S. 73 51 $\frac{3}{7}$ E.	7	20 22 $\frac{1}{2}$	34 58	20 40	
24 April 27.	9 57 $\frac{4}{5}$	N. 84 49 $\frac{1}{6}$ E.	6	19 4 $\frac{5}{8}$	33 4	16 43	
♀ — 28.	9 35 $\frac{1}{2}$	N. 86 15 E.	6	20 1	31 45 $\frac{2}{3}$	14 13	
h — 29.	9 9 $\frac{2}{3}$	N. 85 30 E.	6	18 46	30 29	11 52	
○ — 30.	9 1 $\frac{1}{2}$	N. 84 34 $\frac{2}{7}$ E.	7	17 42 $\frac{1}{4}$	29 21 $\frac{1}{2}$	10 12	Knight's Compass.
	12 6 $\frac{1}{4}$	N. 82 48 $\frac{1}{3}$ E.	6	18 7	29 21	10 12	Ship's ditto.
♂ May 2.	7 53	N. 84 30 E.	6	16 42 $\frac{1}{2}$	27 12 $\frac{1}{3}$	7 11	
♀ — 3.	6 55 $\frac{3}{5}$	N. 84 26 $\frac{3}{7}$ E.	7	16 13 $\frac{5}{8}$	26 42 $\frac{1}{4}$	6 42	
24 — 4.	4 45 $\frac{1}{10}$	N. 52 16 $\frac{2}{3}$ W.	6	17 8	26 25	6 30	
h — 6.	9 48 $\frac{1}{6}$	N. 81 53 $\frac{3}{4}$ E.	8	15 17 $\frac{1}{4}$	23 44 $\frac{5}{6}$	3 40 $\frac{1}{2}$	
	13 33 $\frac{2}{3}$	N. 80 1 $\frac{1}{3}$ E.	6	15 36	23 44 $\frac{1}{6}$	3 40 $\frac{1}{2}$	
○ — 7.	7 10 $\frac{5}{6}$	N. 53 7 $\frac{1}{2}$ W.	8	14 57 $\frac{1}{2}$	23 11 $\frac{1}{2}$	3 0 $\frac{1}{4}$	
	7 58 $\frac{1}{3}$	N. 83 7 $\frac{1}{2}$ E.	4	15 23 $\frac{2}{3}$	22 23 $\frac{2}{3}$	2 12 $\frac{1}{2}$	
h — 8.	18 54 $\frac{1}{6}$	N. 76 16 $\frac{2}{3}$ E.	6	14 21	21 1 $\frac{1}{3}$	0 33	

1775.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s Center.	No. of Obs.	Vari- ation West.	Latitude North.	Longitude West.	Observers, and Remarks.
♂ May 9.	7 22 $\frac{5}{8}$	N. 54 59 $\frac{1}{8}$ W.	6	13 11 $\frac{1}{2}$	20 31 $\frac{2}{3}$	0 4	Gregory's Compass. Mr. Burr.
	8 57 $\frac{1}{10}$	N. 81 25 $\frac{5}{8}$ E.	6	14 55 $\frac{3}{4}$	19 49	0 48	
♂ — 11.	3 17 $\frac{1}{2}$	N. 55 47 $\frac{1}{2}$ W.	6	14 0	18 44 $\frac{1}{3}$	2 23	
	10 58 $\frac{3}{4}$	N. 80 22 $\frac{1}{4}$ E.	8	13 57	18 32 $\frac{1}{2}$	2 35	
♀ — 12.	4 17 $\frac{4}{5}$	N. 55 31 $\frac{7}{8}$ W.	8	13 38 $\frac{5}{8}$	18 21 $\frac{1}{2}$	2 45	
	7 53 $\frac{2}{3}$	N. 81 20 E.	6	13 33 $\frac{1}{3}$	17 55	3 5	
♂ — 13.	16 53 $\frac{1}{2}$	N. 77 32 $\frac{1}{2}$ E.	6	13 51 $\frac{2}{3}$	16 56 $\frac{5}{8}$	4 2	
☉ — 14.	7 26 $\frac{1}{2}$	N. 81 4 $\frac{1}{8}$ E.	6	13 15 $\frac{1}{8}$	16 10 $\frac{1}{3}$	4 55	
♂ — 17.	8 52 $\frac{5}{8}$	N. 54 26 $\frac{2}{3}$ W.	6	12 18 $\frac{1}{8}$	15 55 $\frac{1}{3}$	5 49	On board the ship at St. Helena.
♂ — 22.	24 3	N. 71 1 E.	5	12 12 $\frac{5}{8}$	14 45 $\frac{2}{3}$	7 40	
♂ — 23.	8 20 $\frac{3}{4}$	N. 77 30 $\frac{5}{8}$ E.	8	11 24 $\frac{1}{3}$	13 45 $\frac{2}{3}$	9 40	
♂ — 24.	9 21 $\frac{9}{10}$	N. 76 47 $\frac{1}{2}$ E.	6	10 56 $\frac{1}{8}$	12 9	10 48	
	10 51 $\frac{2}{3}$	N. 76 55 $\frac{5}{8}$ E.	6	11 21 $\frac{2}{3}$		Mr. Gilbert.	
♂ — 25.	9 10 $\frac{1}{2}$	N. 77 35 E.	6	11 13	10 21	11 40	
♀ — 26.	8 26 $\frac{1}{4}$	N. 77 56 $\frac{2}{3}$ E.	6	11 9 $\frac{1}{3}$	8 38 $\frac{1}{8}$	12 45	
♂ — 27.	10 32 $\frac{2}{3}$	N. 77 20 $\frac{5}{8}$ E.	6	10 42 $\frac{5}{8}$	7 55	13 45	
☉ — 28.	3 24 $\frac{1}{10}$	N. 56 48 $\frac{1}{3}$ W.	12	10 54 $\frac{1}{3}$	7 56	14 30	
	Amplit.	N. 57 20 W.	1	11 21 $\frac{1}{2}$		Taken on board the ship, at anchor, off the Island of Ascension.	
♂ — 30.	Ditto.	N. 57 16 W.	1	11 7 $\frac{1}{3}$	7 50 $\frac{1}{2}$	14 37	
♂ — 31.	5 22 $\frac{1}{3}$	N. 55 46 $\frac{2}{3}$ W.	6	11 6 $\frac{5}{8}$			
	11 33 $\frac{1}{3}$	N. 75 49 $\frac{1}{8}$ E.	6	10 9 $\frac{5}{8}$	7 7 $\frac{1}{3}$	15 6	
♂ June 1.	9 8 $\frac{3}{4}$	N. 75 47 $\frac{1}{2}$ E.	6	9 39 $\frac{1}{3}$	6 45 $\frac{1}{8}$	16 55	
♀ — 2.	14 25 $\frac{7}{8}$	N. 74 1 $\frac{2}{3}$ E.	6	9 8	6 29	18 55	
♂ — 3.	10 12 $\frac{1}{8}$	N. 73 41 $\frac{2}{3}$ E.	6	8 11 $\frac{1}{3}$	6 4 $\frac{1}{3}$	21 8	
☉ — 4.	8 32	N. 72 50 $\frac{5}{8}$ E.	6	6 44 $\frac{1}{2}$	5 43 $\frac{2}{3}$	23 15	
♂ — 5.	8 4 $\frac{1}{8}$	N. 71 57 $\frac{1}{2}$ E.	6	5 47 $\frac{1}{8}$	5 14 $\frac{1}{3}$	25 35	
♂ — 6.	6 57 $\frac{3}{4}$	N. 70 39 $\frac{1}{2}$ E.	10	4 22 $\frac{1}{8}$	5 1	27 35	Knight's compass. Gregory's ditto.
	8 58 $\frac{1}{2}$	N. 70 49 $\frac{3}{8}$ E.	8	4 51 $\frac{1}{3}$			
♂ — 7.	8 56 $\frac{2}{9}$	N. 69 45 $\frac{1}{2}$ E.	9	3 40 $\frac{1}{2}$	3 59	29 10	
♂ — 8.	9 11 $\frac{1}{8}$	N. 67 41 $\frac{1}{4}$ E.	8	1 25 $\frac{1}{2}$	3 43 $\frac{1}{8}$	31 35	
♀ — 9.	17 57 $\frac{1}{2}$	N. 62 41 $\frac{2}{3}$ W.	6	1 37 $\frac{2}{3}$	3 47 $\frac{1}{8}$	32 33	Ship's compass. Knight's ditto.
	16 3 $\frac{5}{8}$	N. 64 34 $\frac{1}{2}$ W.	6	0 23 $\frac{1}{8}$			
	6 36 $\frac{2}{3}$	N. 66 43 $\frac{1}{3}$ E.	6	0 14 $\frac{2}{3}$	2 24	32 12	
♂ — 10.	13 1 $\frac{1}{3}$	N. 64 51 $\frac{7}{8}$ W.	8	1 2	1 34	32 0	
	14 2 $\frac{4}{5}$	N. 66 37 $\frac{1}{2}$ E.	8	0 39 $\frac{1}{2}$	0 35 $\frac{5}{8}$	32 0	
					North.		
☉ — 11.	17 10	N. 64 22 W.	10	1 25	0 13 $\frac{1}{3}$	31 50	
	9 11	N. 68 9 $\frac{2}{7}$ E.	7	1 22 $\frac{5}{8}$	1 27 $\frac{2}{3}$	31 40	
♂ — 12.	17 25 $\frac{5}{8}$	N. 63 59 $\frac{1}{8}$ W.	6	2 21 $\frac{5}{8}$	2 13	31 36	
♂ — 13.	10 36 $\frac{7}{8}$	N. 69 20 E.	4	2 13 $\frac{1}{3}$	4 23 $\frac{2}{3}$	31 28	
♀ — 14.	17 13 $\frac{1}{8}$	N. 65 33 $\frac{3}{4}$ W.	12	1 26 $\frac{2}{3}$	4 36 $\frac{1}{2}$	31 20	
♀ — 16.	10 55 $\frac{1}{8}$	N. 62 8 $\frac{3}{4}$ W.	8	5 11 $\frac{1}{4}$	5 11 $\frac{1}{4}$	30 14	
♂ — 17.	10 58 $\frac{1}{2}$	N. 61 45 W.	1	5 32	6 14	30 1	
☉ — 18.	9 27 $\frac{3}{8}$	N. 71 33 $\frac{1}{8}$ E.	8	4 16	6 59 $\frac{1}{2}$	30 10	
♂ — 19.	9 34 $\frac{2}{3}$	N. 72 12 $\frac{6}{7}$ E.	7	4 47 $\frac{5}{8}$	7 53 $\frac{5}{8}$	30 40	
♂ — 20.	10 33 $\frac{3}{4}$	N. 71 55 $\frac{5}{8}$ E.	6	4 14 $\frac{5}{8}$	9 9	32 18	

Very cloudy.

ON BOARD THE RESOLUTION.

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1775.	Altitude of the ☉'s L. L.	Magnetic Azimuth of the ☉'s Center.	No. of Obs.	Vari- ation West.	Latitude North.	Longitude West.	Observers, and Remarks.
♂ June 21.	12 15 $\frac{1}{3}$	N. 71 28 E.	10	3 23	10 47 $\frac{1}{2}$	33 30	{ Taken on board the ship in Fayal Bay. See also p. 140.
♀ — 23.	18 1 $\frac{1}{7}$	N. 72 20 $\frac{5}{7}$ E.	7	3 57 $\frac{1}{3}$	14 13 $\frac{1}{3}$	36 0	
♂ — 24.	17 42 $\frac{3}{8}$	N. 65 57 $\frac{1}{2}$ W.	8	3 46 $\frac{1}{2}$	14 56 $\frac{2}{3}$	36 15	
♂ — 26.	13 0	N. 65 35 W.	6	3 41	18 15	38 34	
	7 23 $\frac{3}{8}$	N. 72 30 E.	7	4 40	19 8 $\frac{1}{6}$	38 57	
♂ — 27.	9 7 $\frac{3}{5}$	N. 64 20 $\frac{5}{8}$ W.	8	4 4 $\frac{5}{8}$	19 57 $\frac{1}{3}$	39 15	
	9 35 $\frac{3}{5}$	N. 72 16 $\frac{2}{5}$ E.	6	3 37 $\frac{2}{3}$	20 50 $\frac{3}{8}$	39 33	
♂ — 29.	15 14 $\frac{1}{6}$	N. 65 50 $\frac{5}{6}$ W.	6	5 6 $\frac{1}{2}$	23 36	40 10	
	16 31 $\frac{1}{2}$	N. 77 47 $\frac{1}{2}$ E.	2	6 8 $\frac{5}{8}$	24 42 $\frac{1}{3}$	40 37	
♀ — 30.	14 51 $\frac{1}{2}$	N. 65 3 $\frac{1}{3}$ W.	6	6 4 $\frac{2}{3}$	25 36 $\frac{2}{3}$	40 50	
	7 40 $\frac{5}{8}$	N. 73 57 $\frac{1}{2}$ E.	10	5 58 $\frac{1}{2}$	26 34 $\frac{1}{2}$	41 5	
♂ July 1.	12 44	N. 64 49 $\frac{1}{6}$ W.	6	5 36 $\frac{1}{6}$	27 33 $\frac{2}{3}$	41 10	
	8 42 $\frac{1}{3}$	N. 75 3 $\frac{1}{3}$ E.	6	6 35 $\frac{1}{3}$	28 13 $\frac{1}{3}$	41 25	
☉ — 2.	18 32 $\frac{5}{6}$	N. 80 10 $\frac{1}{2}$ E.	10	6 32 $\frac{1}{2}$	29 42	41 3	
♂ — 3.	10 54 $\frac{1}{4}$	N. 77 29 $\frac{3}{8}$ E.	8	7 43	30 52 $\frac{2}{3}$	40 37	
♀ — 5.	17 42 $\frac{1}{8}$	N. 64 1 $\frac{1}{3}$ W.	6	9 53	32 38 $\frac{1}{2}$	39 58	
	10 57 $\frac{1}{2}$	N. 79 18 $\frac{1}{3}$ E.	6	9 20	33 2	39 58	
♂ — 6.	16 24 $\frac{1}{4}$	N. 64 6 $\frac{2}{3}$ W.	6	9 14 $\frac{2}{3}$	33 10 $\frac{1}{2}$	39 57 $\frac{1}{2}$	
	10 13 $\frac{1}{2}$	N. 79 10 E.	6	9 33	33 22 $\frac{2}{3}$	39 48	
♀ — 7.	12 42 $\frac{1}{2}$	N. 62 17 $\frac{1}{2}$ W.	6	8 58	33 39 $\frac{1}{2}$	39 44	
♂ — 8.	4 13 $\frac{1}{6}$	N. 55 47 $\frac{1}{2}$ W.	6	9 47	34 18 $\frac{1}{2}$	39 43	
	14 16 $\frac{1}{2}$	N. 83 23 $\frac{1}{8}$ E.	8	10 53 $\frac{1}{2}$	34 52	39 45	
☉ — 9.	14 32 $\frac{1}{2}$	N. 62 37 $\frac{1}{2}$ W.	8	10 8 $\frac{1}{6}$	35 11 $\frac{1}{2}$	39 40	
	12 53 $\frac{1}{3}$	N. 81 53 $\frac{1}{3}$ E.	6	10 8 $\frac{1}{3}$	35 28 $\frac{2}{3}$	39 0	
♂ — 10.	15 16 $\frac{2}{7}$	N. 62 52 $\frac{2}{7}$ W.	7	10 33 $\frac{1}{6}$	36 0 $\frac{2}{3}$	38 20	
♀ — 11.	6 19 $\frac{4}{7}$	N. 54 52 $\frac{6}{7}$ W.	7	12 8 $\frac{2}{3}$	37 9 $\frac{2}{3}$	35 20	
♂ — 12.	11 34 $\frac{1}{2}$	N. 56 27 W.	10	14 42 $\frac{2}{3}$	38 13 $\frac{1}{2}$	32 10	
♂ — 13.	12 23 $\frac{1}{6}$	N. 55 39 $\frac{1}{6}$ W.	6	16 17 $\frac{5}{8}$	38 33	29 15	
♀ — 14.	18 42 $\frac{5}{6}$	N. 81 36 $\frac{2}{3}$ E.	6	21 19	38 31 $\frac{2}{3}$	28 33	
♂ — 19.	15 19 $\frac{1}{2}$	N. 86 48 $\frac{3}{4}$ E.	8	17 33	39 8 $\frac{1}{6}$	25 50	
♀ — 21.	10 55 $\frac{1}{3}$	N. 56 4 $\frac{1}{2}$ W.	10	16 17 $\frac{1}{2}$	39 26	23 36	
♂ — 22.	9 39 $\frac{1}{6}$	N. 54 44 $\frac{1}{6}$ W.	6	16 57 $\frac{5}{6}$	39 54 $\frac{2}{3}$	22 13	
☉ — 23.	14 5 $\frac{1}{3}$	N. 57 54 $\frac{3}{8}$ W.	8	17 44 $\frac{1}{6}$	41 12 $\frac{1}{6}$	19 42	
♂ — 24.	11 49 $\frac{1}{10}$	N. 54 57 $\frac{1}{2}$ W.	10	18 59 $\frac{5}{6}$	42 29	17 45	
♀ — 25.	8 51 $\frac{4}{5}$	N. 50 40 $\frac{5}{9}$ W.	9	20 39 $\frac{1}{6}$	44 6	15 50	
	16 34 $\frac{2}{3}$	S. 79 11 $\frac{7}{8}$ E.	8	21 53 $\frac{2}{3}$	45 5	14 35	
♂ — 27.	15 27 $\frac{2}{5}$	N. 59 1 $\frac{1}{4}$ W.	8	19 40 $\frac{1}{2}$	47 32 $\frac{1}{3}$	10 37	
♀ — 28.	14 4 $\frac{1}{2}$	N. 58 52 W.	10	19 10 $\frac{1}{2}$	48 27 $\frac{1}{2}$	7 58	
♂ — 29.	16 11 $\frac{2}{3}$	N. 60 45 W.	3	19 24	50 6 $\frac{1}{2}$	4 0	
	14 10 $\frac{2}{3}$	N. 58 21 $\frac{2}{3}$ W.	6	19 28			

THE END.

E R R A T A.

Page 2, in the title to the right-hand Col. on the lower part of the page, for *gains* read *loses*.
 Page 65, in the title to the right-hand Col. at the top of the page, for *gains* read *loses*.
 For page 136, read page 139.
 Page 281, Sept. 23d, Col. 6, for 2 h. 25' 55 $\frac{1}{2}$ ", read 2 h. 25' 25 $\frac{1}{2}$ ".
 Page 282, Oct. 10th, Col. 3, for 21 h. 47' 5", read 21 h. 7' 33 $\frac{1}{2}$ ".
 Page 282, July 20th, Col. 3, for oh. 34' 10", read oh. 34' 40".
 Page 311, Aug. 4th, Col. 10, for 19° 11 $\frac{1}{2}$ ', read 18° 31 $\frac{1}{2}$ '.
 Page 311, Aug. 6th, Col. 10, for 18° 34 $\frac{1}{4}$ ', read 19° 14 $\frac{1}{4}$ '.
 Page 328, Longitude of Cape Noir, Col. 9, for 287° 56 $\frac{3}{4}$ ', read 286° 56 $\frac{3}{4}$ '.
 In many places *dele* e in Mr. Bayly's name.



